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International Trade

International Economics Department
The World Bank
January 1991
WPS 584

Whither Hungary and the European Communities?

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Hungary stands to gain considerably from an improvement in its standing in the EC pyramid of privileges. Membership in the EC could lead to an expansion of Hungarian exports to the Community of some 48 percent, with the main gains in meats, iron and steel, fruit and vegetables, textiles, and clothing.

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This paper — a product of the International Trade Division, International Economics Department — is part of a larger effort in PRE to analyze the implications of possible changes in the international economic environment. Copies are available free from the World Bank, 1818 H Street NW, Washington DC 20433. Please contact Grace Ilogon, room S8-038, extension 33732 (48 pages).

Recent political changes in Eastern Europe are leading to closer economic relations between its countries and the EC. Hungary has been granted GSP status by the EC and, with some important exceptions, quantitative restrictions on its exports to the EC will be progressively eliminated.

Further improvement of Hungary's access to the EC market faces three main challenges: the full integration of Spain and Portugal in the EC, unification of Germany, and completion of the EC's internal market in 1992. The inclusion of Spain and Portugal in the EC is likely to stiffen the competition for Hungary's exports to the EC. After German unification, the former GDR — an important market for Hungary — will apply EC measures, and its goods will compete with Hungary's exports on more favorable terms in the rest of the EC. Under EC-92 the reduction of internal barriers will likely cause diversion of trade to other EC suppliers away from non-EC suppliers, by 5-7 percent on average according to the EC's calculations. New regulations and norms will have both positive and negative aspects for Hungary.

The continuing economic problems of Eastern Europe, including the Soviet Union, suggest that Hungary has little alternative but to seek even closer ties with the EC. But Hungary faces important supply constraints and will need an infusion of new technology and physical capital to take advantage of its position on the doorstep of the EC. Hungary has been examining the options of applying for EC membership. It has also considered applying for European Free Trade Association (EFTA) membership — possibly as an interim step toward EC membership — but this seems unlikely to be accepted by the EC, and obtaining EFTA membership would not be easy. EFTA membership would have distinct advantages because the EC/EFTA Protocol allows for virtually free trade in manufactures between the two blocs. Barring EC or EFTA membership, some form of association might yet be broached — along the lines of the EC's special relationship with Turkey, Yugoslavia, and other Mediterranean countries.

Tovias and Laird examined the potential trade effects of such different relationships between the EC and Hungary, including in the context of possible outcomes of the Uruguay Round. Their simulations confirm the importance of an exporter's place in the EC's pyramid of privileges. Membership in the EC could lead to an expansion of Hungary's exports to the EC of some 48 percent, with meats, iron and steel, fruit and vegetables, textiles, and clothing being the main sectors to gain, in declining order. This results from setting tariffs at zero and eliminating non-tariff barriers. Membership in the EFTA would lead to only a 15 percent expansion of exports to the EC, and obtaining the same preferential tariff treatment as the Mediterranean countries would lead to a 10 percent increase. GSP treatment is projected to expand exports by 6 percent. The authors superimposed their Uruguay Round scenarios on these preferential positions and found that the export gains from EC membership are reduced to 43 percent — as EC barriers are reduced for all countries. EFTA membership and the same treatment as other Mediterranean and GSP countries are somewhat better for Hungary than non-Uruguay Round scenarios, because under these scenarios the authors allow for some reduction in non-tariff barriers in agriculture and in the textile and clothing sectors, which more than offsets the relative decline in preferential tariff treatment. Only minor losses to Spain and Portugal would result from improved access to the EC for Hungary.

Produced by the PRE Dissemination Center

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Abbreviations and Acronyms

CAP	The EC's Common Agricultural Policy
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CMEA	Council of Mutual Economic Assistance
EC	European Communities
EFTA	European Free Trade Association
GATT	General Agreement on Tariffs and Trade
GDR	German Democratic Republic
GSP	Generalized System of Preferences
NTB	Non-Tariff Barrier
ODA	Official Development Assistance

I. Introduction*

The development of the European Communities (EC) over more than 30 years from a Customs Union of six countries to a Common Market of 12 countries for goods, services and production factors is bound to affect countries on its periphery more intensively than others. Hungary is in such a position. Moreover, the influence of the EC on Hungary's economy will soon increase, partly because of the changes which have taken place in Central Europe in the last two years, particularly in Hungary itself. The democratization of Hungary is being accompanied by economic reform, including a progressive liberalization of the foreign trade and currency regime, the promotion and protection of foreign private direct investment, and a reconsideration of the Council of Mutual Economic Assistance (CMEA).

The EC affects Hungary's economy both directly and indirectly. In the first category is the non-preferential trade and cooperation agreement concluded between the two parties in September 1988. This has been partially superseded recently by several ad hoc measures in the form of unilateral EC concessions -- the inclusion of Hungary among GSP recipients, the elimination or suspension of QRs on Hungary's exports, and the expansion of textile quotas. In the financial realm, the EC is both the Chairman of a Consultative Group for emergency assistance to Hungary and Poland, contributing this fiscal year a 300 million ECU grant for both countries and a US$1 billion medium-term structural adjustment loan for Hungary. Indirectly, there are several processes by which the EC will affect Hungary:

- The Uruguay Round multilateral trade negotiations, scheduled to be completed in December 1990;
- The incorporation of the German Democratic Republic into the European Communities through German unification;
- The completion of the EC's internal market on December 31 1992; and
- The renewal, revision or establishment of trade schemes with different groups of countries (EFTA, Eastern Europe, Mediterranean countries, GSP and Gulf Cooperation Council).

The first three sub-regions are being singled out by the EC for further privileged treatment through what is called "proximity policy."[1]

The tentative and changing nature of the EC-Hungarian relationship is apparent. What is also apparent is that EC relations with other groups of countries are also changing, and these changes will soon affect EC-Hungarian relations. While the present report will soon become outdated, it may be useful at a time the Hungarian government must think through the implications of different events: those over which it does not have any control and those for which different policy options are open to them.

II. The EC and Hungary As Trade Partners

The economic importance of the EC-12 is impressive when compared to the USSR or the US, as shown in Table 1. In 1987 the combined GNP of the EC-12 was almost as large as that of the US and larger than that of the USSR. The population of the Communities, however, is larger than that of the USSR or of the

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* The authors express their appreciation to Monique Skruzny for some of the statistical work, and to Andras Inotai, Bela Balassa, Ron Duncan, Paul Meo, David Tarr, Chandrashekar Pant and Oli Havrylyshyn for comments on an earlier version.

[1] Agence Europe, October 21, 1989.

US -- a fact which may be more significant in assessing absorption capacities for food or other primary commodities than income. In spite of some newer, poorer members, the average per capita GNP of the EC-12 is one and a half times that of the USSR. This may even be understated in terms of living standards, since much of the Soviet GNP reflects defense expenditure.

The EC is also the largest trading economy in the world, accounting for more than a third of world trade. About half of all world trade takes place in Western Europe and its immediate periphery.[2] Even when excluding from the figures intra-EC trade, the EC's external trade alone almost equalled the trade of the US and Japan combined. The EC has great bargaining power in trade negotiations, and its clout in the OECD is overwhelming, since half of OECD membership is constituted by EC countries.

Finally, the EC's development assistance effort is substantially larger than that of the US or the USSR. The share of the EC-12 in world ODA (average 1986/87) was over 35%, compared to the US's 20% and the USSR's 10%.

As Hungary breaks its tight institutional links with the CMEA, the EC could soon become the most important export outlet for Hungarian goods and services, given:

1) the limited possibilities that Hungary has to expand exports to its neighbors, also undergoing structural reforms;

2) the economic propinquity to the EC (compared to other sizeable markets), coupled with its huge purchasing capacity;

3) the incorporation into a united Germany of the GDR, an important trading partner of Hungary;

4) the widely diffused knowledge of three Western European languages (German, French and English).

Table 1: Some Comparative Statistics for 1987

	EC-12	US	USSR
Area (000/sq.km.)	2,?54.7	9,372.7	22.402.2
Population (mil.)	323.8	243.8	283.1
GNP,$Bn	4,282.0	4,526.7	2500[1]
GNP/per capita (US$)	13,225.4	18,567.3	8,658.2
Exports	391.7[2]	243.7	107.6
Imports	397.2[2]	422.4	95.9
ODA, US$Bn.	19.1[3]	8.9	4.2[1]
ODA/GDP %	0.45	0.20	0.17[1]

Source: WDR 1989; COMTRADE; National Accounts; OECD.
[1] 1988, as estimated by the CIA
[2] excluding intra-EC trade
[3] ODA data for Greece, Luxembourg, Portugal and Spain not available.

While changes for the better or for the worse in any of these factors cannot be foreseen, there are other factors which with time will further increase the relative importance of the EC. One is a further broadening of the EC-Hungary

[2] Narjes (1984), p. 215.

trade agreement and/or further unilateral EC trade concessions. Another is the possible expansion of the EC to include Austria, another important trade partner of Hungary.

A. The present EC-Hungary trading pattern

In the recent past the USSR has been by far Hungary's main export outlet and took as much as one third of its exports in 1985. In the early 1980's Hungary had been exporting more heavily to the EC, particularly low-priced agricultural goods, but in the mid-1980s there was some re-direction of trade toward the USSR for hard currency and oil. This also coincided with an economic downturn in the EC. However, in the second half of the 1980s, the pattern has begun to change with the EC-12 becoming an increasingly important market for a wide range of Hungarian exports.[3] As Table 2 indicates the EC-12's share of Hungarian exports had grown to 22.7 per cent in 1988 while the Soviet share had declined to 27.6 percent (following a 4 6 percent decline in the $ value of this trade).[4] Preliminary data for 1989 and the first half of 1990 show the continuation of these trends, and they are expected to continue -- for reasons discussed in succeeding sections of this paper.[5]

Table 2. Geographical Distribution of Hungary's Merchandise Exports - 1980, 1985, 1988.

Partner	1980		1985		1988	
	$m	%	$m	%	$m	%
World	8,667	100.0	8,555	100.0	9,931	100.0
Austria	378	4.4	460	5.4	568	5.7
EC 12	1,810	20.9	1,373	16.0	2,250	22.7
Germany,F.R.	590	6.8	520	6.1	525	5.3
USA	113	1.3	198	2.3	293	3.0
USSR	2,540	29.3	2,876	33.6	2,742	27.6

Source: COMTRADE

[3] The Yearbook of the Hungarian Statistical Office shows that the share of the EC-12 in 1988 exports increased to 24%. On the other hand, Hungary represents less than 1% of EC's imports. It is also worthwhile noting that the relative importance of trade with the EC is almost twice as large as the average of the other CMEA countries.

[4] Although 45.5% was still exported to CMEA countries in 1988, only 41.2% of total exports was settled in transferable rubles. According to Hungarian sources, the share of CMEA is expected to go down to 40% in 1990, something very significant in historical perspective, given that it was more than 70% in 1960.

[5] Exports to the EC increased by 33.7% in value terms in the first six months of 1989. Even discounting the effect of inflation which on an annual basis was not above 20%, this makes for a very substantial volume increase, at a time when exports to the USSR tended to stagnate if not decline in absolute terms. See EIU nr.4 1989.

As general background on Hungary's trade, Table 3 gives a broad breakdown of the commodity composition of its merchandise exports to the world and the EC in 1983 and 1987. This shows the relative importance of machinery (electrical and non-electrical), food products (especially live animals, meat and meat preparations and fruits and vegetables), basic manufactures (mainly basic iron and steel products as well as textiles), miscellaneous manufactures (especially clothing and furniture) and chemicals, in that order. There were no dramatic shifts in the composition of Hungary's exports to the World in this period. However, the table shows that the increase in the EC-12's share of Hungarian exports was not evenly spread. Among the large trade items -- basic manufactures and machinery, where exports to the world also grew much faster -- more were re-directed to the EC-12 than on average. Also, while this re-orientation of exports in the food and miscellaneous manufactures sector was less strong than the average -- probably due to the restraining influence of the CAP and the EC's textiles regime, respectively -- there was still a strong re-direction of trade towards the EC-12 in these traditional Hungarian export sectors.

Table 3. Hungarian Exports to the World and the EC-12, 1983, 1987.

	Product	1983				1987			
		World		EC12		World		EC12	
		$m	Share in Total %	$m	Share of Exports to World	$m	Share in Total %	$m	Share of Exports to World
	Total	8,722	100.01	1,384	15.9	9,571	100.0	1,912	20.0
0	Food & Live Animals	1,636	18.8	421	25.7	1,529	16.0	476	31.2
1	Beverages & Tobacco	216	2.5	16	7.4	151	1.6	17	11.4
2	Crude Matls Excl Fuels	349	4.0	110	31.7	411	4.3	153	37.1
3	Mineral Fuels Etc	806	9.2	47	5.8	402	4.2	69	17.2
4	Animal, Veg. Oil, Fat	105	1.2	13	12.4	80	0.8	9	11.0
5	Chemicals	883	10.1	203	23.0	1,112	11.6	262	23.5
6	Basic Manufactures	1,090	12.5	216	19.8	1,311	13.7	351	26.8
7	Machines,Transp.Equip.	2,650	30.4	151	5.7	3,249	33.9	243	31.6
8	Misc Manuf Goods	859	9.8	183	21.3	1,152	12.0	292	25.4
9	Goods Not Classfd By Kind	127	1.5	24	18.8	175	1.8	40	23.0

Source: COMTRADE

Note: Percentage calculations and totals are based on more detailed data which are rounded off in this table.

Taking further the comparison of the composition of Hungary's exports to the EC-12 with Hungary's exports to the world for 1987 (Table 4), there are some striking differences. For example, only 16 percent of Hungary's exports to the world are food items whereas nearly 25 percent of its exports to the EC-12 are food items. Again, among the large trade items there is a much higher share of basic manufactures (SITC 6) and miscellaneous manufactures (SITC 8) in Hungary's exports to the EC-12 than to the world. However, when it comes to machinery and transport equipment (SITC 7), these make up 33.9 percent of Hungary's exports to the world but only 12.7 percent of its exports to the EC-12. This appears to be related to the inclusion in world exports of transport equipment (buses) which are exported to the USSR. These products are relatively uncompetitive in the EC. Certainly, tariff rates seem high against Hungary in this sector but other trade barriers that Hungary faces in the EC-12 are not discriminatory against Hungary in this sector. On the contrary, NTB's have been especially aimed at Japanese autos. Moreover, as we shall see in Section IV there is greater protection in other large export sectors. However, it is notable that almost half of Hungary's exports to the USSR are machinery and transport equipment -- mostly buses. (Indeed more than 80 per cent of Hungary's exports of buses are to other CMEA countries). Thus, Hungary's world figures were somewhat distorted by the special trade arrangements within the CMEA and its remains to be seen how these will now change.

Table 4. Commodity composition of Hungary's exports to the world and the EC-12, 1987.

Product	world	EC-12	Difference as % of world Share
Total Export ($m)	9571	1912	
Share in total (percent)	100.0	100.0	
0	16.0	24.9	+55.6
1	1.6	0.8	-50.0
2	4.3	8.0	+86.0
3	4.2	3.6	-14.2
4	0.8	0.4	-50.0
5	11.6	13.7	+18.1
6	13.7	18.4	+34.3
7	33.9	12.7	-62.5
8	12.0	15.3	+27.5
9	1.8	2.1	+16.6

Source: COMTRADE

B. Exports of services: tourism

The World Tourism Organization compiles national statistics reported by some of its members, including Hungary. Although the data available are incomplete, they show (Table 5) that a third of the hotel nights spent by foreign tourists originate in five out of the twelve EC countries for which there are data. The EC-12, therefore, probably has a much larger weight in Hungary's exports of tourism than of goods, comparable to the total CMEA and double as much as the USSR. Moreover, the EC tourists brought convertible currency with them; thus their relative effect on Hungary's balance of payments was likely much larger than the hotel nights demonstrate.

Table 5: Foreign Tourists Nights Spent in Hotels
(number of nights)

Countries 1985	1986	1987	
France	81,000	84,000	92,000
German Federal Republic	1,406,000	1,223,000	1,481,000
Italy	157,000	217,000	307,000
Netherlands	94,000	89,000	128,000
United Kingdom	77,000	85,000	87,000
EC-5	1,815,000	1,698,000	2,095,000
Bulgaria	90,000	97,000	123,000
Czechoslovakia	220,000	255,000	260,000
German Democratic Rep.	237,000	240,000	220,000
Poland	529,000	537,000	450,000
Romania	50,000	27,000	23,000
Soviet Union	881,000	928,000	1,216,000
CMEA	2,007,000	2,084,000	2,292,000
world	5,343,000	5,384,000	6,392,000

Source: Yearbook of Tourism Statistics, Table 5, 1987 and 1988.

The higher share of the EC in Hungary's tourism may be explained by the facts that: 1) trade in tourism services is much less distorted than trade in goods; 2) the CMEA arrangements have little bearing on tourism; 3) tourism demand is directly related to income in the originating countries and to relative transport costs. Since the latter is roughly similar, the different income levels in the two blocs probably explains the present flows more than any other factor. It seems likely that in the future the ECs share in foreign tourist nights spent in Hungary will increase because of the economic crisis in Eastern Europe and the increasing appeal of Eastern Europe to potential Western tourists at the end of the Cold War.

C. Imports

Turning to imports, Hungary's trade with the EC has been increasing since the relatively low level and share of 1984 - see Table 6. According to Hungarian

data, more than a quarter of Hungary's total imports and a third of its manufactured imports originated in the EC by 1988.[6]

Table 6. Geographical Distribution of Hungary's Imports, 1980, 1985, 1988.

	1980		1984		1988	
	$m	%	$m	%	$m	%
World	9,212	100.0	8,084	100.0	9,855	100.0
Austria	497	5.4	408	5.0	626	6.4
EC-12	2,135	23.2	1,651	20.4	2,426	24.6
Germany, F.R.	640	6.9	515	6.4	628	6.4
USA	252	2.7	199	2.5	251	2.5
USSR	2,556	27.7	2,354	29.1	2,805	28.5

Source: COMTRADE

The basic structure of Hungary's imports has not been changing significantly over time. Hungary imports manufactured products from the EC, more than 90%, and half its imports from the USSR are minerals and fuels (see Annex Tables A1 and A2).

The EC is by far the principal supplier of manufactured products, and incorporation of the GDR into the EC will only reinforce this, particularly for machinery. On the other hand, most Hungarian fuels imports originate in the USSR, which is also the prime foreign supplier of agricultural products. A further trade liberalization in Hungary and a reform or withering away of the CMEA would probably increase the share of non-CMEA suppliers, including that of the EC. There is some movement in this direction. The USSR has indicated that it wishes to reduce its fuel deliveries to Hungary in the short run (see later).

Table 7: Geographical Distribution of Hungary's Imports by Main Category of Products, 1987 (percent)

	EC-12	USSR	GDR	AUSTRIA	USA	Rest of the world
Total trade	24.6	28.5	6.4	6.4	2.5	31.7
Agriculture	15.5	25.1	1.5	3.7	3.0	51.3
Mineral fuels	1.7	85.0	1.7	0.2	0.4	11.1
Chemicals	4.2	13.9	5.2	7.3	4.5	24.9
Machines,trans.equip.	27.2	17.5	12.7	8.3	3.3	31.1
Other manuf.products	33.8	11.9	5.8	10.1	1.5	37.0

Source: COMTRADE

[6] According to the Yearbook of the Hungarian Statistical office the share of the EC12 increased moderately in 1988 to 25.3%.

III. Trade Policy of the EC Applied on Hungarian Exports

Until the conclusion of the September 1988 Trade and Cooperation Agreement between the EC and Hungary, the latter was treated as a GATT member as far as tariffs were concerned. However, the EC has a multiplicity of trade arrangements so that, as far as tariffs are concerned, GATT most favored nation (MFN) treatment often works out as the least favorable treatment in practice. In addition, non-tariff barriers (NTBs) have been applied by the EC and its member states in ways which have discriminated against Hungary. Provided there were no serious supply constraints, Hungary's exports to the EC could expand substantially if it were to receive better treatment in the EC trade régime.

(A) Tariffs

Table 8 shows the average tariffs applied by the EC-10 (Belgium-Luxembourg, Denmark, the Federal Republic of Germany, France, Great Britain, Greece, Ireland Italy and the Netherlands) under the common external tariff (CET) in 1983 on imports from Hungary, OECD countries, the socialist (or former socialist) countries (excluding China), developing countries (including China), Mediterranean countries, EFTA countries and the world. The sources of data are discussed in Annex II. There have been only minor changes in tariffs since 1983. This was the mid-point of implementation of the Tokyo Round results which still prevail, but the EC had introduced some of those tariffs ahead of schedule. There have also been minor changes in the GSP and in the arrangements under the Lomé Convention. More importantly, the EC-12 has started to grant improved treatment to Hungary (see later). However, these data give a reasonably accurate picture of the situation until the most recent changes.

Several points must be noted: first, the average rate of 6.8 percent applied against imports from Hungary was much higher than corresponding rates for the world or for other groups of countries. This results from the fact that the EC has a complex structure of tariff preferences under trade agreements with EFTA countries and the Mediterranean countries, while it also accords special tariff treatment to developing countries under the Generalized System of Preferences (GSP) and to former African, Caribbean and Pacific (ACP) territories under the Lomé Convention. Thus, GATT MFN treatment was basically the treatment for non-European industrial countries and the "socialist" countries. Apart from the tariff preferences, Hungary exports many goods which attract relatively high protection in the EC market -- including many labor-intensive goods. This high-protection composition of trade is also why the average rate against Hungary is more than double the average rate against other "socialist" countries, although item-for-item the rates are mostly the same.

Table 8: EC TARIFFS APPLIED IN 1983 AGAINST GROUPS OF EXPORTERS (percent)

SITC	DESCRIPTION	world	OECD	SOC	LDC	MED	EFTA	HUNGARY
ALL	TOTAL TRADE	2.6	3.2	2.7	2.1	1.9	0.3	6.8
00	LIVE ANIMALS	2.2	0.6	4.6	5.6	5.4	1.8	4.8
01	MEAT & PREPARATIONS	13.2	13.2	9.5	14.3	14.2	9.1	9.6
02	DAIRY PRODUCTS & EGGS	10.8	11.1	3.3	1.9	12.0	11.4	12.0
03	FISH & PREPARATIONS	8.2	6.8	12.7	11.5	10.2	3.4	3.3
04	CEREALS AND PREPARATIONS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05	FRUIT & VEGETABLES	8.3	7.1	13.0	9.7	5.7	16.6	14.2
06	SUGAR, PREPARATIONS & HONEY	25.9	27.0	26.6	25.9	15.2	26.3	27.0
07	COFFEE, TEA, COCOA, SPICES	2.5	1.9	2.8	2.5	3.5	8.0	11.6
08	ANIMAL FEEDING STUFF	1.7	0.1	0.3	2.3	0.6	1.6	0.2
09	MISC FOOD PREPARATIONS	12.6	10.7	7.3	14.2	1.5	7.1	4.6
11	BEVERAGES	12.4	7.1	21.3	22.4	16.7	9.0	20.1
12	TOBACCO & MANUFACTURES THEREOF	61.8	66.1	48.7	45.5	70.0	88.2	.
21	HIDES,SKINS, INC. FUR, UNDRESSED	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	OIL SEEDS,NUTS,KERNELS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	RUBBER CRUDE,SYNTHETIC	0.0	0.0	0.1	0.0	0.1	0.0	1.2
24	WOOD, LUMBER & CORK	0.1	0.1	0.0	0.1	0.0	0.0	0.1
25	PULP AND WASTE PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	TEXTILE FIBERS (NOT YARN, THREAD)	0.6	0.6	1.6	0.6	0.1	0.0	2.6
27	CRUDE FERTILIZERS & MINERALS	0.0	0.0	0.2	0.0	0.0	0.0	0.0
28	METALLIFEROUS ORES, METAL SCRAP	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	CRUDE ANIMAL VEG MATERIALS NES	3.6	3.8	0.8	2.7	7.9	1.7	0.7
32	COAL,COKE,BRIQUETTES	2.9	3.0	2.8	2.7	1.8	0.0	0.9
33	PETROLEUM & PETROLEUM PRODUCTS	0.2	0.4	0.6	0.2	0.4	0.0	3.5
34	GAS NATURAL AND MANUFACTURED	0.1	0.6	0.1	0.1	0.1	0.0	1.0
35	ELECTRIC ENERGY	0.0	0.0	0.0	0.0	0.0	0.0	.
41	ANIMAL OILS & FATS	0.5	0.6	2.4	0.2	0.7	0.5	2.2
42	FIXED VEGETABLE OILS & FATS	6.7	9.9	7.4	6.5	8.4	8.8	8.9
43	PROCESD ANIMAL, VEG OIL & FATS	9.2	9.3	0.7	9.5	0.1	13.8	0.5
51	CHEMICAL ELEMENTS & COMPOUNDS	3.3	3.2	4.1	4.0	3.6	0.2	3.0
52	MINERAL TAR & CRUDE CHEMICALS	0.3	0.1	0.8	0.3	0.1	0.0	1.1
53	DYEING, TANNING & COLORING MATRLS	2.7	2.5	8.8	3.9	3.4	0.0	10.0
54	MEDICINAL & PHARM PRODUCTS	2.7	2.5	5.7	5.0	3.6	0.1	6.8
55	ESSENTIAL OILS & PERFUME MATRLS	2.3	2.5	0.7	1.6	1.1	0.0	3.2
56	FERTILIZERS MANUFACTURED	2.5	2.4	3.6	4.1	3.0	0.0	7.5
57	EXPLOSIVES, PYROTECH PRODUCTS	3.9	3.1	5.7	5.4	2.3	0.0	8.9
58	PLASTIC MATERIALS ETC	5.7	5.6	12.5	8.7	3.6	0.0	13.4
59	CHEMICALS NES	3.4	3.3	5.2	4.0	0.9	0.0	6.8
61	LEATHER/FURS INC MANUFS	2.1	1.2	3.7	2.8	3.2	0.0	5.1
62	RUBBER MANUFACTURES	2.9	2.3	6.6	4.3	2.9	0.0	6.8
63	WOOD & CORK MANUFACTURES	4.1	2.8	8.3	5.9	4.2	0.0	6.4
64	PAPER/BOARD & MANUFACTURES	2.7	2.6	8.9	6.7	6.3	1.4	10.5
65	TEXTILE YARN, FABRICS & ARTICLES	5.3	3.2	10.1	7.6	3.0	0.1	12.0
66	NON-METALLIC MINERAL MANUFACTURES	2.0	2.0	4.2	1.1	0.7	0.0	8.6
67	IRON & STEEL	2.3	1.7	5.8	3.3	3.8	0.0	6.0
68	NON-FERROUS METALS	0.6	0.8	0.5	0.5	3.1	0.0	4.1
69	METAL MANUFACTURES NES	3.0	2.5	5.3	4.9	2.5	0.0	6.1
71	MACHINES NON-ELECTRIC	3.3	3.3	5.5	3.9	2.4	0.0	5.3
72	MACHINERY ELECTRIC	6.0	5.7	6.2	7.0	3.5	0.0	6.3
73	TRANSPORT EQUIPMENT	4.7	4.8	8.9	3.4	6.0	0.0	16.9
81	SANITARY,PLUMBG,HEATNG,LGHTNG EQU	2.2	0.9	6.8	4.7	4.3	0.0	8.5
82	FURNITURE	3.2	0.9	6.6	5.4	4.2	0.0	6.7
83	TRAVEL GOODS, HANDBAGS	4.9	3.3	5.1	4.3	4.2	0.0	6.1
84	CLOTHING	7.3	2.1	10.5	9.3	5.4	0.0	13.2
85	FOOTWEAR	6.5	0.7	9.6	9.1	5.9	0.0	11.7
86	PROF. SCIENTIFIC ETC INSTRUMENTS	6.1	6.2	6.9	4.4	1.5	0.0	6.9
89	MISC MANUFACTURES NES	5.1	4.9	6.0	5.0	2.4	0.2	5.5

Source: See Annex II.
Note: Missing values implies no imports in these categories.
SOC - "Socialist" countries of Asia and Eastern Europe plus the USSR and Cuba, excluding China and Hungary.
MED - Mediterranean countries, not elsewhere included, including China,
LDC - Developing countries, not elsewhere included, including China.
OECD- OECD countries, including Spain and Portugal, excluding Turkey.
EFTA- Austria, Finland, Norway, Sweden, Switzerland and Iceland.

With respect to individual categories of products, it is clear from the table that there are relatively high tariffs spread throughout the agricultural sector, as well as in chemicals, textiles, transport (automobiles), clothing and footwear.

(B) Non-Tariff Barriers

By all accounts the main obstacles to market access for Hungary were (and still are) non-tariff barriers (NTBs), some of them targeted specifically at Hungary. In that respect, a distinction must be made between those barriers applied by the EC as a group and those applied by individual member states.

Table 9 gives a broad overview of the use of NTBs by the EC as a group in 1988. A perusal of the table shows that the products concerned were both "sensitive" in the EC and relatively competitive in Hungary.

Table 9: Main NTBs Applied on EC Imports from Hungary, 1988

Type of NTB	Frequency	Main cat. of products concerned
Tariff quotas	4	sheep and lambmeat
Seasonal tariffs	17	apples,cherries
Variable levies	19	sheep and porkmeat,other animal pr.,preserved fruit
Variable component	1	extracts of coffee
Licenses	48	meat,preserved fruit and vegetables,maize,wine
Quotas	2	preserved vegetables
Quotas by country	4	sheepmeat
VERs	22	iron and steel products
MFA restrictive agr.	217	textiles and clothing
Retr. surveillance	1	nitr.fertilizers
Community surveillance	32	apples,footwear,steel pr.
Reference prices	47	fr.fruit & veg.,maize,wine
Price surveillance	228	text./clothing,iron/steel pr.
Anti-dumping investig.	2	urea,nitr.fertilizers
Undertakings	7	alum.oxide,sulphates,drawn wood,glass,transformers, el.lamps and bulbs

Source: Official sources in the EC (mainly the EC Official Journal, GATT documents, and the EC Tariff Schedules) computerized by UNCTAD. See Annex III for more details.

The relative importance in the use of NTBs by the combined member states of the EC-10 (i.e., not EC group measures) in the food sector is given in Table 10.[7] This table shows the percentage of EC imports from Hungary (in 1984 value terms, excluding intra-EC trade) affected by different broad categories of NTBs. Trade is defined by broad standard groupings (with SITC item 67 being included in Ores and metals). The types of NTBs have been categorized into the following broad categories: price-increasing NTBs (e.g., variable levies, anti-dumping duties, tariff quotas, etc), threats (e.g., monitoring systems, automatic licensing, anti-dumping or countervailing investigations. etc.)[8], and quantitative restrictions (e.g., quotas, voluntary export restraints, restraints under the MFA, etc.).

[7] The data in Table 10 are aggregated from the data for the individual member states which have applied a number of NTBs independently of the EC policy. The continued existence of some differences in the application of NTBs by individual members states mainly results from the grandfathering of NTBs applied prior to the Treaty of Rome. In 1992 with the unification of the market it is intended that NTBs will only be commonly applied.

[8] The inclusion of "threats" as NTBs is based on the chilling effect of these measures which have been the subject of other studies. For example, Messerlin (1989) shows that five years after the initiation of anti-dumping investigations by the EC, imports of items covered in the inquiries dropped to half the initial level. Imposition of anti-dumping duties led to even further reductions in imports.

It is important to emphasize that the descriptive statistic used - share of imports affected by NTBs (which is described in more detail in Annex III) - is not a measure of the restrictiveness of NTBs. Rather, it gives a measure of the incidence of NTBs, analogous to some extent to describing sectors as being affected by non-zero tariffs.[9]

Table 10: EC IMPORTS FROM HUNGARY AFFECTED BY NTBS APPLIED IN 1988 BY BROAD IMPORT CATEGORIES

	IMPORTS		NTB TYPES		
	1984 $ '000	PRICE %	THREATS %	QRS %	ALL %
FOOD PRODUCTS	1123110	64.6	1.9	45.3	64.6
AGRIC. RAW MATERIALS	237789	0.1	2.3	5.7	7.6
ORES & METALS	450972	14.1	24.9	30.4	32.5
FUELS	397098	0.0	17.4	9.0	26.5
MNFRS (INC CHEMICALS)	1651383	17.0	3.8	19.4	24.4
TOTAL	3860352	27.7	7.0	26.3	35.2

Source: See Table 9.

In Table 11 information is given for each SITC division (excluding SITC 9) on the EC's NTB treatment of Hungary and other broad groups of countries (the same as were shown for tariffs in Table 8). The table shows a significantly higher incidence in the application of NTBs against Hungary's trade than against other groups of countries -- even other "socialist" countries -- and against the world in general.

In respect of individual SITC divisions, there are only a few in which the share of trade from Hungary affected by some kind of NTB is lower than that for other groups of countries. The final column also gives a more detailed breakdown of the sectors affected by NTBs than was given in Table 10, although only the figure for "All types of NTBs" is given. The breakdown by different types of broad categories of NTBs is given in Annex I, Table A4.

The textiles and clothing sectors are significant in having very high shares of imports from Hungary, other "socialist" countries, and developing countries affected by NTBs. In contrast, the share of imports from OECD countries affected by NTBs is negligible, reflecting their exclusion from the MFA or the EC textile régime. Other important sectors where this type of differential is marked include: petroleum and petroleum products (SITC 33), animals oils and fats (SITC 41), leather goods (SITC 61), paper and paperboard manufactures (SITC 64), iron and steel (SITC 67), sanitary and plumbing equipment (SITC 81) and footwear (SITC 85). However, there are some sectors where the incidence of NTBs against OECD countries is higher, e.g., transport equipment, reflecting the application of VERs by some EC countries against Japan.

[9] Some recent econometric work suggests that, within certain bounds, this definition can be of some help in trying to explain trade flows.

Table 11: EEC IMPORTS FROM PARTNER GROUPS AFFECTED BY NTBS IN 1988 (%)

SITC	DESCRIPTION	world	OECD	SOC	LDCS	MED	EFTA	HUNGARY
ALL	TOTAL TRADE	13.8	16.0	21.4	20.7	7.5	6.7	35.2
00	LIVE ANIMALS	59.9	11.3	80.3	55.7	9.8	87.4	88.3
01	MEAT & PREPARATIONS	83.1	89.0	85.3	74.6	47.6	95.7	39.7
02	DAIRY PRODUCTS & EGGS	83.0	85.0	75.7	60.8	38.4	69.7	89.8
03	FISH & PREPARATIONS	3.0	34.8	40.9	60.3	48.7	63.6	7.9
04	CEREALS AND PREPs	100.0	100.0	100.0	100.0	100.0	100.0	100.0
05	FRUIT & VEGETABLES	53.3	68.4	56.7	38.0	61.7	46.4	61.5
06	SUGAR, honey	98.1	78.1	87.7	99.3	94.8	74.2	58.1
07	COFFEE, TEA, COCOA	27.2	37.2	37.5	22.1	9.7	59.9	65.5
08	ANIMAL FEEDING STUFF	29.2	43.7	24.2	23.0	63.7	4.6	39.8
09	MISC FOOD PREPARATIONS	49.9	50.1	61.1	14.0	62.4	81.3	85.4
11	BEVERAGES	2.1	3.5	0.8	0.2	0.2	0.5	0.3
12	TOBACCO & MANUFACTURES	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	HIDES,SKINS, FUR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	OIL SEEDS,NUTS,KERNELS	1.2	2.7	0.8	0.1	0.0	2.7	9.6
23	RUBBER CRUDE,SYNTHETIC	0.4	0.0	7.4	0.1	0.0	0.0	6.8
24	WOOD, LUMBER & CORK	0.0	0.0	0.0	0.0	0.0	0.0	0.1
25	PULP AND WASTE PAPER	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	TEXTILE FIBERS	12.8	8.7	18.3	12.8	45.5	7.0	18.9
27	CRUDE FERTILIZERS	18.3	3.1	17.1	16.4	3.5	17.7	40.0
28	METALLIFEROUS ORES	7.4	12.2	1.9	3.7	0.9	2.5	5.2
29	CRUDE ANIMAL VEG MATs	18.0	14.0	30.2	19.4	14.7	16.1	21.9
32	COAL,COKE,BRIQUETTES	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	PETROLEUM & PRODUCTS	12.3	17.2	28.1	10.5	14.0	4.3	32.6
34	GAS NATURAL AND Mnfd	1.2	0.0	11.1	0.0	0.0	0.0	0.5
35	ELECTRIC ENERGY	1.5	0.0	11.1	0.0	.	0.0	.
41	ANIMAL OILS & FATS	6.6	10.3	2.2	0.2	0.0	1.2	34.4
42	FIXED VEG. OILS & FATS	6.4	2.2	0.2	0.1	98.7	0.2	0.0
43	PROCESD OILS & FATS	0.0	0.0	0.1	0.0	0.0	0.0	4.2
51	CHEMICAL ELMNTS & cmpds	1.8	2.6	4.0	0.9	0.0	2.6	1.2
52	MINERAL TAR	0.8	0.1	3.0	1.0	0.0	0.0	2.9
53	DYEING, TANNING MATRLS	0.9	0.7	15.1	5.1	0.0	0.0	7.3
54	MED & PHARM PRODUCTS	5.3	5.4	4.9	2.7	4.4	6.8	7.1
55	ESSENTIAL OILS S	0.8	0.5	0.1	2.0	0.0	0.0	0.0
56	FERTILIZERS MANUFACTURED	1.7	6.6	11.6	0.0	0.0	0.0	11.5
57	EXPLOSIVES	0.4	0.0	21.7	5.6	0.0	0.0	24.8
58	PLASTIC MATERIALS ETC	1.5	1.1	20.2	1.9	0.0	0.0	9.1
59	CHEMICALS NES	8.2	14.3	6.6	19.4	8.7	1.7	5.5
61	LEATHER/FURS INC MANUFS	16.4	11.2	32.1	12.1	92.7	3.5	43.1
62	RUBBER MANUFACTURES	6.2	0.9	26.4	14.9	0.0	0.0	16.6
63	WOOD & CORK MNFS	33.5	23.8	52.1	46.3	4.6	23.2	16.7
64	PAPER/BOARD & MNFS	35.4	42.2	27.0	12.7	0.0	12.7	78.6
65	TXTL YARN, FBRCS,ARTCLS	29.6	1.4	77.6	69.7	0.1	0.6	96.9
66	NON-METALLIC MIN MNFS	7.3	5.0	36.4	4.6	11.0	0.1	32.7
67	IRON & STEEL	32.7	19.2	57.9	28.7	8.9	44.5	61.4
68	NON-FERROUS METALS	2.0	4.4	0.4	0.5	0.1	1.5	5.8
69	METAL MANUFACTURES NES	2.5	1.5	7.6	3.5	5.7	2.1	4.3
71	MACHINES NON-ELECTRIC	4.2	6.6	7.5	0.8	0.1	0.5	11.2
72	MACHINERY ELECTRIC	6.8	9.9	18.9	7.1	5.4	3.7	7.0
73	TRANSPORT EQUIPMENT	11.0	34.3	11.0	3.3	3.4	3.1	7.4
81	SANITARY, ETC EQUIP	3.1	1.1	1.6	5.3	0.2	0.3	62.5
82	FURNITURE	13.1	8.0	21.6	11.5	10.6	9.8	19.6
83	TRAVEL GOODS, HANDBAGS	0.2	0.0	2.7	0.0	0.0	0.0	4.2
84	CLOTHING	52.9	0.2	93.7	77.3	0.3	0.3	90.2
85	FOOTWEAR	40.5	22.7	69.0	45.4	21.3	25.9	66.7
86	PROF. SCIENTIFIC INSTS	5.4	7.5	24.1	1.5	0.9	1.6	3.9
89	MISC MANUFACTURES NES	3.4	5.5	8.5	3.1	0.1	0.5	3.2

Source: See Table 9.
Notes: See Table 8.

IV. Recent Changes in Hungary's Trade Relations with the EC Hungary

Hungary established diplomatic relations and signed a nonpreferential agreement with the EC in September 1988, based on Article 113 of the Treaty of Rome. This agreement provided for the progressive elimination of quantitative restrictions on Hungarian exports into the EC and access for Community firms in the Hungarian market. However, textiles and steel products continue to be covered by separate agreements; and the September 1988 agreement has only a "best endeavors clause" in relation to agricultural products -- which means, in essence, they are virtually excluded. Hungary continues to apply VERs on exports of sheep, mutton and lamb to the EC. These exceptions detract greatly from the economic value of the agreement since:

- EC tariff and nontariff protection is highest for agriculture,
- Between a third and a quarter of EC imports from Hungary are agricultural products, and
- Compared to other sectors, agriculture is the most export-oriented sector in Hungary, with more than 30% being exported.

According to Hungarian officials, the September 1988 agreement simply ended a dispute between Hungary and the EC dating back to 1975, after Hungary's accession to the GATT. The EC declined to apply GATT's Article 13, abolishing QRs, and therefore did not confer full GATT status on Hungary.[10] Thus, the September 1988 accord only harmonized positions among OECD countries vis-a-vis Hungary. However, Hungary is still considered by the EC to be a "state trading country."[11] This did not prevent the EC from granting Hungary GSP status on January 1, 1990 on "an exceptional basis," as it did for Romania.[12] The US, Japan and Austria have done the same. Superseding the September 1988 agreement, which indicated such measures would be phased in much later on, all discriminatory QRs specifically aimed at State Trading countries were eliminated on January 1, 1990. The EC has also suspended provisionally for one year all general QRs which also affected Hungarian exports.[13] Furthermore, as of March 1990, the EC has agreed to modify the textile agreements in force and to expand the textile quotas on Hungary's exports in 1990-91 by 13%, an increase twice the rate suggested by the MFA, and valued at ECU39 million.[14] There have been negotiations both for nonpreferential trade concessions on agricultural products on a reciprocal basis and for the setting up later this year of an agreement in

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[10] Hungary has been requesting the removal of those QRs for more than 20 years. It is interesting to note that Italy -- which, together with the FRG, currently champions the cause of Hungary in the EC -- was the country most reluctant to accede to Hungary's demands, since it had by far the longest list of specific QRs on Hungary's exports.

[11] Another sign of the low status of the agreement is that according to its article 12, member countries are allowed to sign economic cooperation agreements with Hungary, independently of the EC, thus retaining national authority over cooperation ventures. The same applies to export credit policies.

[12] The EC's GSP includes a limited list of agricultural imports on which the CCT is partially reduced. According to EIU(1990), both Hungary's access to the GSP and the abolition of QRs will boost exports by only $50 Mo. annually, a 2% increase in exports to the EC.

[13] The suspension is not being applied by Spain nor Portugal.

[14] Agence Europe, March 24, 1990.

the coal and steel sector.[15] The latter would include the elimination of the EC's barriers to trade on steel products. There has already been a 15% increase in EC quotas applied to a series of countries, including Hungary, which have steel agreements with the EC.[16]

As a result of these actions, the position of Hungary in the EC's pyramid of privilege has been changing dramatically in the last year. Whereas, as late as early 1989, Hungary was placed in the worst category, it is currently in a better position than the developing or semi-industrialized countries of Latin America or Asia, or the non-EFTA countries in the OECD. However, it receives far worse treatment than that accorded to other semi-industrialized economies bordering the Mediterranean, not to speak of EFTA. While the manufactured exports of non-EC Mediterranean countries enter the Community duty-free and quota-free,[17] Hungary confronts a high frequency of NTBs applied on "sensitive imports" where it has a comparative advantage (textiles, clothing, footwear, glass products, iron and steel products, some chemicals, electric lamps and bulbs). Agricultural exports of nonmember Mediterranean countries will be subject to duty-free tariff quotas by 1996, on a par with Spain for some sensitive products and no limitations for others, while Hungarian exports will be restricted by licenses, seasonal tariffs, Community surveillance, quotas and by the Common Customs Tariff.[18]

V. Three Challenges to Hungary's Exports

At a time when the Hungarian authorities have opted for a further opening of the economy, market access to the richest nearby market is likely to be vital to ensure the success of its liberalization efforts. Hungary may thus want to improve further its position in the EC's pyramid of privilege as far as tariff preferences are concerned. Yet, such a step must be considered along with several recent or future changes in the EC environment of importance for Hungary -- the southern enlargement of the EC, the enlargement to include the GDR under German unification, and the completion of the EC's internal market, scheduled to take place by January 1, 1993. These events acquire particular relevance given the size and nature of Hungary's trade with Western markets and the former GDR, and the new industrial strategy of Hungary, which will rely on an expansion of exports to the West. The impact on Hungary's economy may go well beyond that of its direct exports to the EC. For instance, suppliers of intermediary products, machinery and equipment have a large influence in shaping the economic structure in the purchasing countries by imposing their standards, patterns, models, norms, customs, and procedures. This is what is expected to happen after "1992" with an all-pervading effect on Hungary's economic environment. Interestingly, in 1987 40% of the machinery imported by Hungary originated either in the EC or in the GDR, a share that should increase as the combined result of the agreements between the EC and Hungary, the latter's country trade liberalization, and the

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[15] Hungary received some concessions relating to tariffs, levies and tariff quotas on goose liver, onions, cherries and several other less important products. See also Agence Europe, April 19, 1990.

[16] However, five EC member states still apply national quotas on imports from Hungary(the FRG, Italy and the Benelux countries).

[17] There are, however, some VER agreements on textiles with several Mediterranean countries such as Morocco and Tunisia

[18] Although the latter will be reduced in the future on an m.f.n basis for some selected products, or by application of the Community's GSP scheme to Hungary.

modernization strategies adopted by the present government.[19] If foreign direct investment originates predominantly in Western Europe -- and in particular in Germany -- there is reason to believe that machinery will also originate from there.[20]

A. First challenge: The progressive integration of Spain and Portugal into the European system of division of labor

According to Hungarian sources, there is ample evidence to show that, as a result of the enlargement of the EC to include Greece, Spain and Portugal, trade diversion took place against Hungary in favor of EC producers of meat, electrical and textile products in those three markets. However this will be minimal compared to the expected full impact of the southern enlargement of the EC which has not yet affected agricultural exports from Spain. In fact Spain (and Portugal) will obtain free access to the EC for their agricultural products only by 1996. Both countries will improve substantially on their previous, preferred Mediterranean status, which entailed very few tariff reductions. Moreover, the new members will benefit progressively from all the advantages of the CAP (e.g., they will obtain export refunds, receive guaranteed prices, and so on) which will not take effect until January 1, 1996.

Moreover, the EC has added new protocols to the agreements concluded with Mediterranean nonmembers in the mid-1970s. These new protocols provide for the progressive elimination of customs duties on traditional quantities of fruits and vegetables exported to the EC by these third Mediterranean countries. As a **quid pro quo**, the Canary Islands and Ceuta and Melilla will be accorded the same treatment received by other Mediterranean countries under these new additional protocols. These, therefore, must be seen as part of "Operation Enlargement."

Spanish and Portuguese manufactured exports were given duty-free access in the EC and in EFTA on July 1, 1989 in advance of what had been scheduled in the respective Treaties of Accession to the EC. There are, however, some exceptions for sensitive products (which Hungary exports to the EC as well) for which free market access will be given much later to Spain and Portugal. Even for nonsensitive manufactured products the full impact on Hungary is going to be felt in the coming months if not years.[21]

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[19] It is difficult to predict how imports of machinery from the ex-GDR will evolve once this territory will be incorporated in the EC-12. Some lower quality, lower technology imports may be replaced by Western European equipment. On the other hand, the need for spare parts will tend to maintain such flow at least in the short run. Moreover the GDR will be a partner to the Hungary-EC agreement and benefit as a GATT member from all the liberalization measures adopted by Hungary.

[20] The weight of the FRG is not reflected in Hungarian import statistics, because much of the machinery is imported through Austria or produced in Austria by German multinationals. More than 75% of FDI in Hungary originates in Austria, West Germany and Switzerland.

[21] Duty-free access into Spanish and Portuguese industrial markets by EC and EFTA countries will take place by January 1, 1993. The two acceding countries are approximating their customs duties progressively to the level of the EC's Common Customs Tariff (CCT), and will adopt it completely by January 1, 1993 as well (with the exception of some products for which the deadline is advanced by several years). This step invariably implies a reduction in tariff protection levels on non-EC countries' industrial exports. However given Hungary's trade patterns, these two future changes will be of minor significance for it.

The two newcomers are competitors of Hungary in some key areas. It was therefore considered useful to compare the two countries' export performances in specific sectors with that of Hungary. For this purpose we use Balassa's Revealed Comparative Advantage[22] (RCA), which, as a proxy for comparative advantage, measures the relative share of an industry's exports of one country in the total exports of that country to the share of the same industry's exports worldwide to world exports as a whole. We computed the indices for Spain, Portugal and Hungary for the years 1986-87 in relation to the markets of the EC-10. Trade data were disaggregated at the SITC four-digit level (see Annex I Table A3). As might be expected, the RCA overlap between Hungary and Spain includes a number of agricultural exports which are restricted in the EC, such as meats, fruits and juices, vegetables and wine. Other major Hungarian exports (over $10m) to the EC for which Hungary and Spain display a similar comparative advantage in the EC-10 are: gasoline, hydrocarbons, footwear and prepared parts of footwear, wood manufactures, rubber tires and tubes, various iron and steel products, unwrought aluminum, domestic electrical equipment, furniture, and fur clothing.

Hungary's overlap with Portugal's RCAs has almost no agricultural products, except wine. However, it is heavily skewed in the direction of very sensitive items in the EC, namely, various textile, clothing and footwear items. Other overlapped products where Hungary's exports exceed $10 million are animal materials n.e.s., hydrocarbons, nitrogenous fertilizers, other wood manufactures, and leather clothing.

B. Second challenge: The integration of the GDR in the European Community

The integration of the former GDR into the Ecunder German unity will inevitably affect Hungary, but the effects can already be assessed tentatively. First, by the GDR leaving the CMEA and adopting the EC's Common Trade Policy new barriers on trade between that part of Germany which previously constituted the GDR and Hungary will affect a number of goods, e.g., footwear and travel goods, which were part of Hungary's exports to the GDR. It is impossible to say if the substitution of Hungary's undertakings to buy given quantities of (mainly) industrial products from the GDR under the CMEA system for GATT-approved tariff rates under the EC's Common External Tariff will hinder or promote more exports to the GDR.[23]

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[22] See Balassa (1965). If the ratio or index is greater than unity this is generally interpreted to mean that there is comparative advantage for the industry/country in question, and comparative disadvantage if the ratio is less than unity. However, some care is needed in interpreting these RCA indices. Yeats (1985) points out that the RCA index has neither cardinal nor ordinal properties. This means it is essentially binary -- an RCA greater than 1 implies that the exporter has comparative advantage in the sector for which the index number is computed and does not have comparative advantage in other sectors. One cannot say that a country has greater comparative advantage in sectors for which the index number is higher, nor can one say that a country has greater comparative advantage in a single sector than in another country which has a lower index number (that is still greater than one). This means, for example, that we could replace the values in Annex Table A3 with a binary variable, such as 1/0 or Y/N, where 1 or Y indicates comparative advantage and 0 or N indicates no comparative advantage.

[23] In some cases, the entry of the GDR in the EC could have a very detrimental effect. For instance, the GDR has an agreement with Hungary whereby the latter endeavors to buy all its buses from Hungary, something the EC has already announced must be discontinued. The Economist, March 31, 1990.

While the EC seems to accept that there is a political imperative for reunified Germany to take over the legal obligations of the GDR to the USSR at

Secondly, and more important, Hungarian exporters will encounter stiffer competition in the 11 Community markets newly opened to East German exporters.[24] Therefore, because of its present relevance a historical comparison of the GDR's revealed comparative advantage in those 11 EC markets with Hungary's seems warranted. (Annex Table A:3 shows the products where the GDR index is larger than 1).

There is little overlap in the agriculture sector in the comparative advantage of Hungary and the former GDR. The main areas where overlap occurs include: meat, n.e.s., fresh , chilled or frozen (mostly pork), vendered pig and poultry fat, oil seeds, nuts, etc., and to a less extent live animals for food, n.e.s. Outside the food sector, there is a wide range of major Hungarian export items where there is overlapping comparative advantage with the GDR: distillate fuels, mineral jellies and waxes, hydrocarbons, nitrogen-function compounds, nitrogenous fertilizers, rubber tires and tubes, other wood manufactures, numerous iron and steel products, harvesting machinery, several items of electrical equipment, furniture, travel goods, non-knitted textile clothing, accessories, and fur clothing. Some of these products are heavily protected in the EC, not by tariffs but rather by various NTBs, such as variable levies, QRs, VERs.

Thirdly, under German unity the eastern part of the country will receive a large amount of new investment and will be eligible for EC aid distributed through the EC's structural funds. Both will contribute to increased competitiveness of former East German firms exporting the same products as Hungary. The highly protectionist Common Agricultural Policy now also covers the whole of Germany. This will impair both Hungary's exports of live animals and animal oils there as well as cattle, meat and cereal exports to the rest of the EC.[25]

C. Third challenge : Hungary and "1992"

The Single European Act, which came into force on July 1, 1987, contains a series of amendments to the Treaty of Rome, aimed at facilitating the creation of an economic space without frontiers in the EC-12 by 1992. About two thirds of the 279 new directives, which have to be adopted to complete this ambitious project, will require only a weighted majority voting, not unanimity as in the past. The deadline imposed, December 31, 1992, does not appear totally unrealistic in view of these new voting rules. Inspite of the assurances given by the EC since the autumn of 1988 whereby the 1992 Program is a domestic issue and does not imply any modification in the level of protection confronted by extra-EC exporters of goods or services (including manpower), there is a direct link between internal liberalization and the trade of the EC partners, particularly those on the EC's periphery. Here a clear distinction must be made among different groups of trading partners, since the EC applies a regionalist philosophy to its common external trade policy. The instruments used by the EC to confer privilege on different groups of third countries have been mainly, but not exclusively, tariff preferences or preferential tariff quotas. Since the 1992 Program deals mainly with non-tariff barriers, there is a question whether the EC will find it useful to extend the concept of preference to NTBs. A priori this seems highly likely, given that GATT regulations are much less pervading in

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least for a limited period, this is not the case for other CMEA members. See Financial Times, March 27, 1990.

[24] East German exporters had virtually full access to the FRG for more than 30 years.

[25] According to The Economist, March 31 1990, the EC expects increased surpluses of cereals as a result of applying the CAP regime to the GDR.

this domain than for tariffs. There is no need, for example, for the EC to even try to comply with conditions laid down in Article XXVI of GATT (which relates exclusively to customs unions and free trade areas). In practice, then, the EC can make bilateral deals on NTBs with other countries whenever it wishes.

A June 1989 report[26] noted that, since the adoption of the White Paper and the ratification of the Single European Act, progress has been hectic. The Commission had drafted 274 of the 279 directives required by the White Paper by December 1989. By January 1990, 142 new directives of the 279 had been already adopted by the Council of Ministers, i.e., 60% of the Programme.[27]

Those EC officials consulted do not believe that 1992 per se will discriminate against Hungary. Market access is not a major issue for Hungary (except for the all-important case of agriculture, as well as textiles and iron/steel products) but rather the need for its own economic adjustment. There is total agreement on this, both inside and outside of Hungary, but there is literally no work under way at the EC Commission specifically aimed at the impact of "1992" on Hungary. The EC is concentrating its effort on its role as Consultative Group chairman for emergency help to Hungary and Poland as well as focusing on the complex East German integration.

A priori the dangers of trade diversion for Hungary as a result of "1992" are reduced because dependence on EC markets for most goods affected by the "1992" program has been relatively small up to now. Some food products (such as meat preparations or preserved fruit) are outstanding exceptions because in their case both the EC's share in total exports is significant and they will be affected by new EC directives relating to phitosanitary matters. This may explain why Hungarian experts believe that the EC should first eliminate tariffs and QRs on imports of agricultural, steel and textile products, before tackling other NTBs.

A perusal of the Checchini Report shows that the EC is expecting a decrease in extra-EC imports of 5 to 7% on average according to the assumptions made. The rate of change is much larger for some sectors (e.g., for communications, credit and insurance) than for others. In sectors where Hungary displays comparative advantage (such as textiles or iron and steel products) the expected decrease ranges from 5 to 12%[28] Note however that agriculture was excluded from the estimations. However, it seems implausible that EC imports of all textile and clothing imports should decline after 1992, particularly if there is also some opening of this and other sectors as a result of the Uruguay Round negotiations along the lines indicated by the simulation results presented earlier in the paper.

Penetrating the EC market after 1992 will require, however, even greater marketing efforts by Hungary's inexperienced exporters. There will be even greater competition before from within the Community as internal trade is further deregulated under the 1992 Program. Thus, the main "1992"-linked problem for Hungarian authorities is that they must succeed not only in making Hungarian products and services competitive with those produced currently by EC firms, but

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[26] See Fourth Progress Report of the Commission to the Council and to the European Parliament concerning the implementation of the Commission's White Paper, COM(89) 311 final, June 20, 1989.

[27] See Financial Times, December 9, 1989; Agence Europe, January 11 1990. At the same time implementation of directives by member states is slower than predicted. Of the 88 directives which should have been implemented, only 14 have actually been implemented by all the member states.

[28] See European Economy (1988), p. 183.

with those to be produced after 1992. The challenge of "1992" for Hungarian exporters will not only be reflected in more competition in EC markets but worldwide. A clear example is exports of railroad equipment to the Third world, where Hungary is currently competing with EC firms. The latter presumably will be able to lower costs by better exploiting economies of scale and other productivity gains derived from EC-92. Another danger is that investors may play safe by locating their capital in an already deregulated post-92 EC. The potential for investment diversion (or more simply "non-creation") is real and may be an important impact of "1992" on Hungary,[29] which the latter may counteract by requesting associate EC status, as specified in the next section.[30]

Beyond the issue of competitiveness there are some specific problems arising from either the discriminatory abolition of NTBs in the EC or the "communitarization" of some of the individual members' policies. "Communitarization" will affect the visa policies of member states. Nowadays there is wide disparity of treatment of Hungarians wishing to travel to countries of the EC. For instance, obtaining a visa to visit France takes on average of three weeks, compared to an hour if the visa is for the FRG.[31] (Before German unity, Hungarians did not need visas to visit East Germany).

With respect to migrant workers, although this has been of minor importance for Hungary in the past, the EC's desire to constrain the flow of foreign workers means that a common visa policy towards Hungary would in all likelihood hinder potential migrants from Hungary to Germany which is already heavily affected by east-west migration within the country. More restrictive visa and immigration policies would be unwelcome in Hungary at a time that massive unemployment is expected as a secondary outcome of economic reform. To put this issue in perspective, recent experience in Southern Europe shows that a critical factor in the success of liberalization programs was the possibility open to those unemployed to migrate to more prosperous parts of Europe. The best known precedent is the large-scale emigration from Spain in the early 1960s in the wake of sweeping liberalization measures adopted in the period 1957-1959 by the Spanish Government.

The EC may take a fresh look into the question of visas required from Eastern European citizens in the EC. Interestingly, Italy tends to line up with West Germany on visa issues. It decided last year that business travellers from Hungary do not need visas for periods of less than one month, a step that Austria took in the mid-1970s, before scrapping visas altogether. Italy is said to be pressing other EC countries to suppress visas on Hungary's travellers at the same time that this will be done for the GDR.[32]

The elimination of NTBs on intra-EC trade may affect Hungary in several ways; but some may be considered of critical importance:

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[29] See Tomann, H.(1989), p.308.

[30] Note however that even associate status would not preclude Hungarian suppliers from being negatively affected by new local content and origin rules, which are part and parcel of some of the directives facilitating intra-EC trade in goods and services, e.g., in the domain of government procurement.

[31] Two years ago, the FRG was studying the possibility of suppressing the need for visas for Hungarian travellers, but France and the UK opposed it on the grounds that Germany would have to go back and impose visas in "1992," once visa policies would have to be harmonized in the EC.

[32] See Agence Europe, April 12, 1990.

1) Deregulation of road transport in the EC will be a challenge for Hungarocamion, Hungary's very efficient trucking firm. Hungarocamion now handles considerable road cargo between Europe and the Middle East via Budapest. EC-92 road liberalization will permit -- for example -- an Italian firm to supply transport services from Greece to Denmark without any restriction, while this possibility will not be open to Hungarocamion. Hungary would like to reach an agreement with the EC to increase Hungarocamion's options, but the EC may ask for some reciprocity.

Viewed from another angle, the liberalization of road transport rules inside the EC will favor consumers of products that embody those services relatively intensively, like perishable products from Hungary, but it will also be advantageous for some of their competitors in Southern Europe which use trucks to convey their fruits and vegetables to Central European markets. Producers of similar products transported from further away by other transport modes will be adversely affected. In any event the deregulation of road transport will probably stimulate Hungarian exports of products where the share of freight in costs is high such as perishable animal and vegetable products.

2) On the other hand, **the elimination of border formalities on intra-EC trade** (e.g., passport controls, exchange controls, origin controls, statistical reporting, transit noticing)[33] will be detrimental to Hungarian exporters of perishable products (e.g., food exports) competing with domestic EC producers and where prompt delivery is a key element.

3) Of less critical importance for Hungary are changes in the regulatory environment concerning norms, standards and certification. It will only be an issue in a few selected cases. For instance, Hungary is not a member of such European standards organizations as CEN or CENELEC. However, adjusting to EC norms should not be an issue since in many instances it has adopted German norms. The high level of standards imposed by the FRG has accustomed Hungarian firms to coping with difficult technical problems. For instance, traditional exporters of electrical equipment are accustomed to Western demands. This is not true, however, for many other sectors, where firms have been producing according to CMEA, Soviet or Hungarian standards. Switching to EC standards may be more difficult in those cases.

In spite of the optimism on norms and standards, there are currently some problems with health standards in food products which must be overcome. A typical example is that the EC requires certain steel qualities to be used in some canned products which are not available in Hungary.

After 1992, inspection of food products produced in the EC will be done at source, but imports from Hungary will be in general inspected at the EC's external borders and then issued a "passport" allowing for free circulation in the EC. The "passport" will then be checked at the point of arrival. This gives an advantage to the domestic EC producer because any failure to pass the inspection does not involve substantial costs as for the non-EC producer in Hungary. This puts Hungary's meat exports at a disadvantage when compared, say, to the GDR, which will be included in the Internal Market.

There are some positive aspects for Hungary from the Internal Market, such as:

1) A reduction in the number of norms and standards (from 12 to 1) with which producers will have to comply once minimum European-wide

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[33] I.e., the obligation imposed on shippers to submit a transit notice upon entering each member state in the course of a Community transit operation.

standards have been adopted, allowing for free circulation in the Community for approved products. This is very important for Hungary's food and machinery sectors, which may be able to achieve some economies of scale, thanks to the dismantling of the EC's internal technical barriers.

2) A reduction in the number of tests and inspections to be overcome for some types of products in order to sell in different EC member countries; obtaining a certificate from one of the EC-approved laboratories will be enough. The main beneficiaries in Hungary would be food, chemical, pharmaceutical and equipment industries.

3) Although there is considerable debate in the EC itself about the specific impact that the completion of the EC's Internal Market will have on growth rates,[34] there is consensus that there will be a significant and positive impact on the present level of the EC's GDP.[35] The exact effect this increased demand will have on Hungary's exports to the EC will depend on the success of Hungary's present adjustment efforts. Nevertheless, the most positive impact could be expected on industries producing goods or services with high income elasticities of final demand in the EC -- such as tourism -- but for most other Hungarian exports, primary products (including food), clothing or machinery, income elasticities are low or very low.[36]

Among the measures of the EC-92 program there is one likely to have a detrimental effect on Hungary's exports of agricultural exports: the doubling of the EC structural funds until 1992. This may reduce export opportunities from Hungary's producers of fruit, vegetables, and spices since one of the guiding principles of the fund is to promote the diversification of production in Southern Europe away from products where the degree of EC self-sufficiency is already high.[37]

One logistical problem that EC-1992 presents for Hungary is that its firms are not well represented in the EC and that there is little time in the less than 1000 days available in which to establish viable subsidiaries or branches in order to overcome potential discrimination between established and non-established firms deriving from "1992" or pre-empt reciprocity requests by the

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[34] See estimates in Commission (1988), i.e., the Cecchini Report, Centre for Business Strategy (1989), The Economist, November 18, 1989. The Checchini Report estimated that the EC's GDP would increase by a minimum of 4.5% after a period of five years.

[35] Another expected source of growth is now German reunification which according to some estimations would add .5% to the EC growth rate. See Financial Times, March 31, 1990; Agence Europe, April 21, 1990.

[36] Income elasticities of demand for primary products range from .3 for raw materials to .7 for nonferrous metals, with the exception of fuels(1.9). See Balassa, B. (1987). In the case of the EC, however, the income elasticity of demand for fuels is considerably lower, ranging from .5 to .8.

[37] Yannopoulos, G.(1988), pp.103-12. Much of the GDR's territory would be classified as regions which are the focus of the reorganized funds. The Commission has already stressed that no aid will be granted to the detriment of the current beneficiary regions, which means an additional impact on outsiders such as Hungary.

EC.[38] It is difficult to envisage such a possibility in Hungary, not only because capital is not the abundant factor, but also because of the tremendous balance of payment and foreign debt problems the country currently faces,[39] with even tighter exchange controls likely to be imposed in the future.

Finally, mention should be made of two sectors for which the changes in the regulatory environment implied by EC-92 are quite contradictory and the same may have a substantial impact on Hungary's economy: air transport and tourism services.

(i) Air Transport

Three aviation issues affect Hungary:

a) Non-EC countries are worried that fifth freedom rights (the right of a carrier based in one country to offer services between two foreign countries) they have with individual EC countries may be impaired now that the EC is likely to act as a single country. Negotiation of landing rights with a body representing 12 countries instead of one implies a change of bargaining power in favor of the European partner. Hungary's airline, Malev, will be in a very weak bargaining position with the EC.

b) The disappearance of tax-free shopping on intra-EC traffic improves the competitive position of non-EC members as a tourist destination. Airport authorities may raise EC landing fees to compensate for the disappearance of a very lucrative source of revenue. In sum, the post-1992 regime may divert some tourists away from the EC to alternative, Hungarian destinations.[40]

c) On the other hand, intra-European air transport deregulation should lead, according to different studies,[41] to a 10 to 20% reduction in most intra-EC air fares.[42] This implies some trade diversion against Hungary (less tourist arrivals, etc.) unless air fares to and from Hungary are also reduced.

Because of the critical importance of air transport to services exported by Hungary to the EC-12 and of the lack of competitiveness of Malev, the privatization of this airline should be a high priority. A recent World Bank

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[38] A new directive, which is a part of the EC-92 program, is geared to conferring freedom of providing banking services by EC-based financial institutions, but this privilege will not be extended to third countries' financial firms unless those countries pass a reciprocity test.

[39] According to the last EIU Hungary Country Report, foreign debt stood at $20.7 bn at the end of December 1989. The debt-service ratio is currently higher than 40%. See EIU(1990).

[40] See Agence Europe, October 21, 1989. According to a study of the Netherlands Economic institute air fares on intra-EC travel could increase by 10% on this account and estimates that Greece could see its income from tourism drop by 10%. See also Financial Times, March 9, 1990.

[41] See International Herald Tribune, June 1, 1988; Commission(1988), p.98.

[42] EC transport ministers decided in early December 1989 that airlines flying between community destinations will be able to cut fares by up to 20% from January 1, 1990 without needing approval from countries at both ends of the route, but only from one of the two. See International Herald Tribune, December 12, 1989.

study[43] shows that price elasticities of air freight demand are fairly high, ranging from -0.8 to -1.6, while price elasticities of air transport for passengers on vacation stretch from -1.1 to -2.7. This points to the tremendous rewards that any policy of air transport cost reduction could have for Hungary.

(ii) Tourism

The abolition of all exchange controls in most EC countries by 1990 is bound to increase travel. Tourism to Hungary is also likely to be affected by changes in the internal market for production factors. A unified factor market will facilitate intra-European labor mobility, which in turn will lead to a convergence of labor costs in the EC-12. In other words, the cost of labor-intensive activities, like tourism in Southern Europe (particularly in the new member countries), is bound to rise substantially. Moreover, Spain and Portugal must adjust themselves entirely to the Common Agricultural Policy by 1996, a move implying a substantial increase in the price of food in the two countries. Both trends are bound to lead Northern and Central Europeans to travel further south and east. Hungary should be able to capture some of the increased demand. This is only possible if the relative price of air transport between EC countries and Hungary in terms of the price of North-South intra-EC routes does not increase, thus canceling the favorable impact of the completion of the Internal Market listed above.

VI. Hungary's Future Trade Regime with Western Europe

Hungary is considering strengthening its ties with Western Europe since the CMEA is disintegrating; transferable-ruble trade will soon be eliminated. Hungary's position is a difficult one. As an economic partner of the USSR up to the mid-1980s, it could obtain its energy and raw materials at very good terms, in view of the low-quality manufactured goods it was able to use to pay its CMEA partners. This has been changing. On the one hand a growing share of imports have had to be paid with "hard goods," including agricultural products or manufactured goods with import content from the West (e.g., electronic consumer goods, measuring instruments and metal-working machinery). On the other hand, the USSR has been using an increasing share of "soft goods" in its barter trade with Hungary (e.g., iron-ore with low iron content, coal and lumber which when delivered are frozen, so that they cannot be ignited easily; gas and crude oil have been delivered erratically). One result has been that Hungary has accumulated unconvertible ruble surpluses which cannot be used in trade with other CMEA partners and which are hard to use in future trade and payments agreements.[44] Thus they must be considered as a non-interest bearing loan with undetermined maturity to the USSR. The government limited exports to the USSR on a temporary basis beginning January 18, 1990, after cutting subsidies to firms exporting to CMEA countries in July 1988.[45] These restrictions have led to the temporary closing of plants or layoffs in plants whose output is mainly for export to the USSR. Economic adjustment will be painful and likely to create mass unemployment.

If trade with the USSR, an important trade partner, is less desirable for Hungary, it has apparently no other realistic option than to turn to the West,

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[43] Oum, T.H. et al.(1990).

[44] This happened for the first time in 1988, when the surplus reached 424 million TRs.

[45] EIU, nr.4,1988. Interestingly, subsidies and other incentives schemes given to exporters to the West have not been cut.

and as indicated in our simulations (see below), closer relations could lead to substantially greater trade. Indeed, some Hungarian economists predict that the EC could replace the USSR as an outlet for Hungarian goods.[46] However, there is no question that Hungary also faces considerable supply constraints, since at least in the short term a shift of industrial exports from CMEA to Western markets can be done only at high cost. Much of the embodied technology and physical capital is unadapted and would have to be scrapped altogether. The transportation infrastructure is geared to trade with CMEA countries. But there is currently substantial uncertainty on the kind of institutional links that Hungary should strive for with Western European economies. Prime Minister Antall, expressed the wish in mid-April 1990 that his country become a member of the EC between 1992 and 1995.[47] The possibility of applying for membership in EFTA was evoked by the president of the Hungarian Socialist Party in June 1989, as a stepping stone for EC membership later on.[48] Although this view is rejected by the EC, the idea has some merit from another perspective. As a member of EFTA, Hungary would also become a member of the European Economic Space which is currently being negotiated between the EC and EFTA members. Membership in EFTA may not affect relations with the USSR, given the Finnish precedent.[49] However, membership in EFTA is not so attractive as it seems for Hungary since (1) agriculture is not covered by EFTA nor by present and pending EC-EFTA agreements, (2) the only important EFTA market for Hungary is Austria, which may soon opt out of EFTA to enter the EC. EFTA members, moreover, have not shown a particular interest in fostering links with European developing countries and may perceive an enlargement of EFTA as a distraction from their plans to reach an agreement on the EES with the EC. There are other reasons why EFTA may be reluctant to admit new Eastern European members. Their currencies are not convertible; their economies are not market oriented; and EFTA rules do not facilitate the entry of new members. The reason membership in EFTA is proposed by Hungary is often political: EFTA is more "neutral" than the EC, less political and more economically focussed; not at all linked with NATO.

Barring EC or EFTA membership, the possibility of defining a new kind of relationship with the EC is currently being examined in different quarters. To start with, the EC has some experience in dealing with developing countries in its periphery (which incidentally EFTA has not). The Yugoslavia-EC agreements might be a model to be followed. Other possible models are the Greece-EC or Turkey-EC association agreements of the 1960s. This would be only a second-best, however, since discrimination in EC markets is largest for Hungarian agricultural (both horticultural and meat) exports. The main advantage of association is that it would send a very important signal to foreign investors looking for easy access to large markets.

The EC may be preparing to negotiate with each CMEA country what are called "special association agreements," which place CMEA countries somewhere in between EFTA and the Mediterranean nonmember countries in the pyramid of preferences.

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[46] See International Herald Tribune, March 24, 1989. The FRG had guaranteed a $1 billion loan to Hungary much before the EC did in early 1990. The FRG is already well represented in Hungary's cultural and academic life when compared to other EC countries (Goethe Institute, F.Naumann Foundation). German firms are deemed to be eager to expand subcontracting activities they have already with many Hungarian firms. This can be facilitated by offering to Hungary a generous EC trade agreement. About half the joint ventures of Hungarian firms are with West German firms. Financial Times, March 23, 1990.

[47] Agence Europe, April 18 1990.

[48] See Kostrzewa,W. and Schmieding,H.(1989),p.514.

[49] Kostrzewa, W.and Schmieding, H.(1989)

The idea would be to go beyond the usual concessions contained in the Mediterranean agreements (in trade, finance and social security) and extend them to cultural, educational, information and technological areas. "Political dialogue" would also be institutionalized. On the other hand, there would be no mention in the agreements of the possibility of membership at a later stage, which would give them less status than the 1963 Turkey-EC agreement. There is likely to be considerable debate inside the EC concerning the extent of trade concessions to CMEA countries. In particular, the Mediterranean members of the EC (including France) want the EC to limit its generosity both because they fear new competition in agricultural and other sensitive products, but also because they want to limit the erosion of the status of Maghreb countries in the EC's system of foreign economic relations.

It is not clear yet if the association agreements would be based on reciprocity. More likely than not, Hungary would not be asked to reciprocate at this stage, pending Hungary's transition to a market economy. This would obviate the need to address in the short term the difficult question of how to treat imports from the USSR and other CMEA members once a decision to give reverse preferences to the EC-12 would have been taken.

VII. Simulations of the Possible Effects of Changes in the EC Merchandise Trade Régime

Following recent reforms in Eastern Europe, the EC and other Western countries have indicated their willingness to revise the treatment accorded to the East and some changes have already been implemented. There are also a number of other changes being discussed in Europe, such as the extension of the EC and the European space concept, and the GATT-sponsored Uruguay Round of trade negotiations is drawing to a close. To attempt to capture the direct trade impact of possible changes on Hungary, a series of simulations have been carried out using a standard partial equilibrium trade model for the estimation of direct trade effects of various trade liberalization scenarios for trade in goods - see Annex II for more details on the model and the data used for the simulations. This type of model does not take account of the economy-wide effects of changes, such as inter-industry effects, exchange rate effects and the stimulus to investment. On the other hand, calculations are made at a very detailed level, the national tariff line, and aggregated for reporting purposes.[50]

On the basis of the defined scenarios and the basic parameters, the model computes the estimated direct trade effects:

(i) trade creation (or loss) following a change in tariff rates or non-tariff barriers. This results from changes in demand in the market as a consequence of price changes associated with tariff changes (it is assumed that the price change will fully reflect the tariff change, i.e., that the benefits of the tariff change are passed on to consumers); and

(ii) trade diversion - the substitution of goods coming from the exporter for goods from other foreign suppliers, or vice-versa, resulting from changes in relative import prices associated with changes in tariffs facing different trading partners. Changes may result from

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[50] The national tariff line (according to the NIMEXE classification of the EC) results were then concorded to the SITC (Standard International Trade Classification) for reporting purposes. Since the concordance between the NIMEXE and the SITC is not perfect some misallocation of results to SITC categories could occur.

the existence of differential rates before the liberalization or from liberalization which is not equal for all trading partners.

Trade creation and trade diversion effects are summed to calculate the total effect.

The model has been designed to estimate the effects of trade liberalization scenarios in which ad valorem rates are modified. Data on ad valorem tariffs are taken from the GATT Tariff Study. However, as we have seen, the EC applies NTBs in many sectors and any realistic attempt at modeling trade liberalization needs to take these into account. The approach we have used to handle NTBs is to use data compiled from prior micro-economic studies on the ad valorem equivalent of non-tariff barriers. This was taken from a survey by Laird and Yeats (1990a).

Some comments need to be made on the studies surveyed by Laird and Yeats. Typically, these studies identify the price disadvantage of domestically produced goods relative to the goods' international prices. The ad valorem equivalent of an NTB is assumed to equal the percentage price disadvantage less the tariff rate. Of course, this method at best gives a rough order of magnitude for the trade effects of NTBs, for several reasons. The NTBs themselves have changed (generally increased) since these studies were carried out. In addition, ad valorem "tariff equivalents" vary according to international prices. Also, NTBs have effects that are not fully captured by the idea of "tariff equivalents" - some NTBs operate on demand (e.g., quotas) while others operate on supply (e.g., voluntary export restraints).

While international prices were used to compute price disadvantages in some of these studies, an alternative approach was used for products affected by variable levies in the EC -- mainly agricultural products. For such products, data are available on these levies over time and were used to compute average price disadvantages over a three to five year period (within the period 1975-83).

One problem needs a special mention. The NTB studies surveyed do not allow the computation of tariff equivalents of NTBs separately for each trading partner. The prices disadvantages are against the international price. Thus, we cannot say, for example, that Hungary is more or less penalized by EC NTBs on the basis of these data. The only exception to this is that we know that the MFA applies only to the main textile and clothing exporters and the "socialist" countries were similarly affected by the EC textile régime. Accordingly, for all products in these categories we have assumed that the ad valorem equivalent of the NTBs does not apply to OECD countries. In all other cases we have assumed that EC NTBs are equally applied to all non-EC countries.

A number of possible scenarios were modelled. First, we examined the idea of the EC granting Hungary better treatment in its trade régime than at present. Secondly, we considered possible results from the Uruguay Round and how these might affect Hungary, including in the context of possible improved treatment not associated with the Uruguay Round. Finally, we considered how Hungary might be affected within the concept of a wider European economic "space".

These scenarios need some further explanation, but first a qualification about the data. For all the scenarios we have modified the base data - which relates to the trade régime of the EC-10 as it existed in 1983 - to include Spain and Portugal within the EC. However, we did not have data on Spain's or Portugal's imports and, therefore, were not able to alter the base to include them. Thus, we look at the scenarios modifying the behavior of the EC-10, but with Spain and Portugal getting EC treatment. In fact, as we shall see, this scenario provides an opportunity to see the diversion of trade from within the EC to other trading partners as the external barriers are removed -- and to understand the political sensitivities of Southern European countries, now in the EC, to any further opening of the market to possible competitors.

Given this starting point, the first set of scenarios examines the possible effects of improved treatment for Hungary in isolation from other changes that are taking place. First, we consider the granting of GSP treatment by the EC to Hungary. We computed the average GSP rate, tariff item by item, and allocated this average rate to Hungary. Second, we consider the granting to Hungary of similar treatment to that accorded to the Mediterranean countries under bilateral arrangements with the EC, again by allocating the average tariff available to these countries. Third, we consider the implications of Hungary getting the same treatment as EFTA countries (in effect, of Hungary joining EFTA). Again, the average rate for these countries was allocated to Hungary. (This implies setting virtually all tariffs outside the agricultural sector to zero). Finally, we consider the effects of Hungary attaining membership of the EC, in which case all tariffs are set to zero and external NTBs are also eliminated for Hungary. In the other three scenarios NTBs remain unchanged.

In the second set of scenarios we consider the effects of the Uruguay Round and then we superimpose onto those the effects of changed treatment for Hungary along the lines of the first set of scenarios. The Uruguay Round is, at the time of writing, still under way and it is impossible to be precise about the type of package that might be finally negotiated. We do not make any claims as to the realism of our assumptions about the outcome of the Round, only that they give an order of magnitude along the lines that have been discussed by a wide range of countries representing different interests. We have, therefore, ventured to include in our scenarios the following assumptions:

- In the agricultural sector, the overall level of support will decrease by 20 percent. Thus we reduce the ad valorem equivalent of our package of tariffs and NTBs by some 20 percent.

- In the textiles and clothing sectors, we have left tariffs unchanged, but we eliminate all NTBs - along the lines of proposals for the elimination of the MFA, but we include the EC textile régime in the package.

- for all other sectors we reduce tariffs by 30 per cent - the overall objective for the Round

Our third set of scenarios concerns the idea of establishing a wider European economic space, encompassing the EC and EFTA as well as Hungary, Czechoslovakia, Poland, Romania, Yugoslavia and the GDR (which was not part of Germany in our data base). Apart from the wide geographical concept we have adopted, we have taken the trade regime of the concept to cover either of two possibilities. One is a zero tariff régime, including in agriculture, but with no changes in NTBs, and the second implies the elimination of NTBs as well as the establishment of zero tariffs.

The overall direct effects on Hungary's merchandise exports under these scenarios are shown in Table 12. The first column shows the import base which is used for the simulation exercises. The second column looks at the possible effects on Hungary of several possible changes in the tariff treatment which Hungary could receive bilaterally from the EC. The third column looks at the same changes, as well as the possible effects of participation wider arrangements for the whole of Europe (the "European space"), but all these results are examined in the context of the posited changes that might occur as a result of the implementation of the Uruguay Round results (as outlined earlier).

The change which would be expected to lead to the greatest expansion of imports from Hungary, a projected 48 percent increase, would come from full membership of the EC. The increase would be somewhat less under the Uruguay Round liberalization scenario - only 43 percent. The difference between the two results is that there is a greater gain to Hungary through the diversion of trade of third countries if Hungary alone were to join the EC, whereas in the Uruguay

Round scenario other countries also benefit from the reduction of the EC's external barriers, with the consequence of less gains for Hungary.

Compared to its present treatment, Hungary would gain progressively more from GSP treatment, special Mediterranean preferences, and from membership of EFTA, in that order. In all of these cases the additional liberalization that would occur under the Uruguay Round scenarios is greater than in the absence of the Uruguay Round, outweighing any erosion of such preferences. The main reason for this is that in the Uruguay Round scenarios there is a reduction of non-tariff barriers in the agriculture sector and the elimination of MFA (with no tariff changes) in the textiles and clothing sector. Under the improved preference scenarios, tariffs alone are reduced, with no changes in the incidence of non-tariff barriers. It is also noted that Hungary would expect to get more from the Uruguay Round scenarios alone than it would from GSP in the absence of the Uruguay Round, i.e. MFN liberalization would serve it better than "preferential" treatment.

The final two results shown in Table 12 relate to the creation of a wider European space, with a projected 24.4 percent expansion from the reduction of EC tariffs to zero for all European countries and a 37.9 percent expansion following the elimination of NTBs as well as the tariff reductions.

We now look more closely at the sectoral breakdown of the results by two digit SITC, Revision 1, categories - see Table 13. In the first set of scenarios - reflecting improved preferential tariff treatment for Hungary alone, the sectoral breakdown typically reflects the overall results, namely that membership of the EFTA is better than the treatment afforded under the Mediterranean rate which in turn is better than the treatment under the GSP provisions. However, in agriculture the gains under GSP and Mediterranean country treatment are also greater than the gains that would be obtained from membership of EFTA. In the case of EC membership the sectoral results are similar to those for EFTA membership in the manufactures sub-sectors, reflecting the duty free trade under the EC-EFTA Protocol, but EC membership brings markedly greater gains in the agriculture and related sectors. The sectors where the greatest gains are to be obtained from EC membership would be, in declining order: iron and steel, meat and meat preparations, fruits and vegetables, textiles, and clothing.

The second set of scenarios -- in which the assumed Uruguay Round results provide a backdrop for looking at the effects of improved treatment for Hungary in the EC. As in the first set of scenarios, the greatest gains are under the scenario in which Hungary gains EC membership. Setting this aside, and outside the food categories, the greatest gains would, with few exceptions, be from EFTA membership, receipt of Mediterranean preferences, and GSP treatment, in declining order. For products with no NTBs, EFTA membership would be as good as being in the EC itself. In the food categories, the treatment typically accorded to GSP beneficiaries and Mediterranean countries would be preferable to that accorded EFTA countries, and the treatment of the Mediterranean countries is significantly better than GSP treatment in some categories.

Table 12: Effects on Hungary of changes in EC merchandise trade policy régime

	Imports 1983	Estimated trade increase No U.R.		Uruguay Round	
	$'000	$'000	%	$'000	%
	969305				
No special treatment				81049	8.4
Hungary gets treatment of:					
- GSP beneficiaries		57984	6.0	125071	12.9
- Mediterranean countries		96086	9.9	155036	16.0
- EFTA countries		145063	15.0	187848	19.4
- Other EC countries		465654	48.0	418055	43.1
Hungary benefits from:					
- European space (tariffs=0)				236978	24.4
- European space (tariffs & NTBS=0)				367372	37.9

In the case of EC treatment, the categories recording the greatest gains in absolute terms are, in descending order: iron and steel (SITC 67), meat and meat preparations (SITC 01), fruit and vegetables (SITC 04), clothing (SITC 84) and textiles (SITC 65). The gains in the latter category are twice as great as for the next category - electrical machinery (SITC 72). In non-EC scenarios (overlaying the Uruguay Round results in which NTBs are reduced in agriculture, textiles and clothing), the greatest gains are recorded in textiles and clothing, followed by a wide range of chemicals and other manufacturing categories. Fruit and vegetables, meat and even beverages do well in the food categories. An examination of the results for individual tariff items - not reported here because of the enormous amount of detail - show that in these sectors the results are quite widespread, i.e., they are not a consequence of the changes for a few items only. This reflects Hungary's diversified production base.

The winners and losers among countries other than Hungary are not reported in detail for the various scenarios, but we comment on some of the more interesting results. Under all the Uruguay Round scenarios, the major trade diversion losses -- a combined total of some $1.3 billion -- accrue to Portugal and Spain which are now within the EC. The negative effects -- some $75 million -- are much smaller for Sweden and smaller again for Norway ($27 million), both of which benefit from the EC's special arrangements for duty free entry of manufactures from EFTA countries. These losses -- which result from the erosion of the preferential margin these countries have over Hungary in the EC market -- are the largest we estimate under any of the scenarios. There are only modest losses through trade diversion for some ACP countries which currently are at the top of the EC's pyramid of preferences because of the Lomé Convention arrangements. (The greatest losses are $5 million for Uganda, $3 million for Ethiopia and $2.7 million for Somalia). However, under non-Uruguay Round scenarios the losses are much more modest and spread among a wider group of countries, e.g., losses are recorded for the US ($26 million), Spain ($36 million), Portugal ($12 million) if Hungary were to join the EC, but under the pure GSP scenario the losses to Spain and Portugal are estimated at only $3.1 million and $1.1 million, respectively. This suggests that fears of trade losses to Southern European members of the EC from its possible expansion to cover Hungary at least are greatly exaggerated.

It is emphasized that these results are based on a simulation model and are directly linked to the assumptions and the parameters used. Moreover, the model is of a comparative static type. There is no implication that these results would be expected to occur overnight. Moreover, with progressive implementation -- which is more likely -- the results would also be progressively achieved.

Table 13: Effects of changes in EC trade régime on Hungary, by SITC 2 Digit

SITC	Description	Imports 83	GSP	Med.	EFTA	EC	Uruguay Round plus rate for: UR	GSP	Med.	EFTA	EC
	TOTAL TRADE	969305	57984.2	96086.4	145062.6	465653.9	81048.7	125070.6	155035.5	187847.9	418054.7
00	LIVE ANIMALS	4379	348.6	355.0	0.0	1445.3	53.7	334.4	339.6	53.7	1218.2
01	MEAT & PREPARATIONS	75857	3120.9	2905.2	0.0	55102.6	3320.0	5846.1	5669.3	3320.0	48223.6
02	DAIRY PRODUCTS & EGGS	8	0.0	0.0	0.0	6.0	0.1	0.1	0.1	0.1	4.9
03	FISH & PREPARATIONS	3232	32.0	133.5	0.0	503.5	27.9	53.5	135.2	27.9	432.9
04	CEREALS AND PREPARATIONS	11322	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05	FRUIT & VEGETABLES	48667	5027.5	9473.9	4.5	50659.6	4455.3	8554.8	12191.8	4459.0	46088.4
06	SUGAR, PREPARATIONS & HONEY	6930	464.2	4551.6	0.0	10338.3	329.0	710.3	4068.2	329.0	8829.8
07	COFFEE, TEA, COCOA, SPICES	5063	511.6	1092.4	0.0	2286.3	314.5	727.2	1196.0	314.5	2159.1
08	ANIMAL FEEDING STUFF	10382	29.2	41.5	0.0	8516.5	510.1	534.7	544.9	510.1	7576.2
09	MISC FOOD PREPARATIONS	6419	36.0	219.8	152.5	5156.0	473.8	503.0	651.8	597.4	4721.4
11	BEVERAGES	15334	1631.3	2088.5	67.8	12576.9	1511.0	2832.1	3204.0	1567.4	11731.4
21	HIDES,SKINS, INC. FUR, UNDRESSED	1213	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	OIL SEEDS,NUTS,KERNELS	14326	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	RUBBER CRUDE,SYNTHETIC	230	4.2	0.0	11.9	11.9	2.9	5.6	2.9	10.6	10.6
24	WOOD, LUMBER & CORK	24661	37.8	38.8	98.0	98.0	29.0	53.7	54.4	92.9	92.9
25	PULP AND WASTE PAPER	346	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	TEXTILE FIBRES (NOT YARN, THREAD)	10766	365.9	515.5	1047.7	3940.8	282.2	520.9	618.5	965.5	3862.8
27	CRUDE FERTILIZERS & MINERALS	1798	0.3	1.3	2.1	2.1	0.2	0.4	1.1	1.6	1.6
28	METALLIFEROUS ORES, METAL SCRAP	9683	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	CRUDE ANIMAL VEG MATERIALS NES	54373	338.3	341.5	0.0	2526.6	136.8	409.5	412.2	136.8	2172.2
32	COAL,COKE,BRIQUETTES	71	0.1	0.6	3.7	3.7	0.3	0.4	0.7	2.7	2.7
33	PETROLEUM & PETROLEUM PRODUCTS	43767	3024.2	3242.2	8174.2	8174.2	1680.3	3657.2	3799.5	7022.7	7022.7
34	GAS NATURAL AND MANUFACTURED	11764	235.1	234.8	672.6	672.6	117.7	270.8	270.6	555.7	555.7
41	ANIMAL OILS & FATS	3436	137.2	136.0	1.5	397.2	17.7	127.7	126.7	19.0	332.0
42	FIXED VEGETABLE OILS & FATS	1926	136.0	107.4	0.0	4569.6	210.2	322.8	299.1	210.2	3988.6
43	PROCESD ANIMAL, VEG OIL & FATS	8	0.1	0.2	0.1	0.2	0.0	0.1	0.2	0.1	0.2
51	CHEMICAL ELEMENTS & COMPOUNDS	81702	4206.1	8652.6	11883.0	11913.2	2522.3	5309.7	8260.7	10388.5	10412.7
52	MINERAL TAR & CRUDE CHEMICALS	17867	272.8	284.0	790.5	790.5	127.6	305.5	312.8	643.0	643.0
53	DYEING, TANNING & COLORING MATRLS	856	147.4	178.6	421.5	421.5	96.6	194.2	214.9	375.8	375.8
54	MEDICINAL & PHARM PRODUCTS	6095	780.5	1069.8	2188.1	2201.4	472.1	990.0	1181.6	1922.4	1931.1
55	ESSENTIAL OILS & PERFUME MATRLS	1739	112.2	171.6	294.1	294.1	77.1	151.0	190.4	270.8	270.8
56	FERTILIZERS MANUFACTURED	32895	1896.6	4725.6	11918.4	11918.4	3415.7	4661.0	6506.0	11213.5	11213.5
57	EXPLOSIVES, PYROTECH PRODUCTS	277	44.4	68.6	127.1	127.1	35.2	64.3	80.1	118.4	118.4
58	PLASTIC MATERIALS ETC	8735	1928.2	4267.5	5796.5	5796.5	1578.8	2846.8	4379.5	5385.6	5385.6
59	CHEMICALS NES	2267	286.6	729.1	815.3	815.8	187.2	376.7	668.8	725 5	725.8
61	LEATHER/FURS INC MANUFS	7744	609.7	713.7	1727.8	2168.0	484.0	881.4	949.1	1609.9	2050.7
62	RUBBER MANUFACTURES	10281	1089.6	1763.4	3194.5	3194.5	957.8	1667.7	2106.7	3039.0	3039.0
63	WOOD & CORK MANUFACTURES	11068	940.7	1178.7	2702.1	2702.1	617.4	1233.7	1390.5	2387.2	2387.2
64	PAPER/BOARD & MANUFACTURES	3125	417.7	452.1	1172.5	1209.0	342.0	615.2	637.8	1108.6	1132.7
65	TEXTILE YARN, FABRICS & ARTICLES	33921	3668.3	6651.5	10283.6	47674.2	18788.9	23314.8	26994.1	31456.7	31456.7
66	NON-METALLIC MINERAL MANUFACTURES	22141	1943.8	3983.0	7088.7	10998.7	1794.7	3068.2	4405.8	6437.0	10364.1
67	IRON & STEEL	68360	3270.2	4228.2	12155.7	82250.0	3396.7	5527.8	6152.1	11317.9	81618.8
68	NON-FERROUS METALS	20595	1055.9	1391.4	3071.8	3071.8	930.7	1622.2	1841.4	2941.3	2941.3
69	METAL MANUFACTURES NES	17300	1340.3	1829.5	4113.9	4318.0	1085.8	1962.3	2282.4	3775.1	3979.6

71	MACHINES NON-ELECTRIC	41943	2088.7	3350.3	5948.5	5948.5	1568.4	2933.5	3757.1	5455.7	5455.7
72	MACHINERY ELECTRIC	65130	4101.3	5292.0	11690.4	18061.3	3228.0	5906.3	6684.1	10861.8	17250.9
73	TRANSPORT EQUIPMENT	13554.0	1629.9	1676.7	4653.2	4653.2	1567.4	2627.4	2658.0	4594.7	4594.7
81	SANITARY,PLUMBG,HEATNG,LGHTNG EQU	5267.6	490.3	914.6	1282.2	2199.0	405.9	725.3	1001.3	1241.2	2160.8
82	FURNITURE	21624.8	966.4	1808.1	4767.4	16537.7	1522.2	2150.9	2698.5	4623.7	16402.7
83	TRAVEL GOODS, HANDBAGS	3065.0	226.1	280.5	643.9	643.9	179.6	326.9	362.4	599.2	599.2
84	CLOTHING	46034.2	5477.3	10004.4	15629.4	40842.6	19047.8	24702.7	29360.8	35180.9	35180.9
85	FOOTWEAR	15788.4	1707.0	2011.6	5531.9	10789.1	1682.0	2796.0	2994.9	5291.4	10561.3
86	PROF. SCIENTIFIC ETC INSTRUMENTS	5654.0	384.9	682.9	1072.8	1072.8	269.9	522.0	717.2	972.6	972.6
89	MISC MANUFACTURES NES	23739.0	1354.4	2171.1	3669.4	5613.1	1101.5	1985.4	2518.1	3495.9	5380.3

Source: Estimates by the authors. See text for methodology.

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VIII. Conclusions

Recent political changes in Eastern Europe will help to cement improving economic relations between those countries and the EC. They will accelerate a trend which flows in part from the economic pull of the EC and in part from the continuing economic difficulties in Eastern Europe. In our view Hungary has little alternative but to seek to continue strengthening these ties. The final integration of Portugal and Spain in the Communities, the unification of Germany and the completion of the internal market in 1992 will pose some challenges for Hungary. Moreover, it faces important supply constraints and needs injections of fresh capital to help it gear up to seize market opportunities.

In the past Hungary has been somewhere near the bottom of the EC's pyramid of privileges as far as tariff and NTB treatment are concerned, although this has changed modestly with the granting of GSP tariff treatment. Hungary has been examining the options of applying for EC membership, EFTA membership, and examining other forms of association such as those the EC has with a number of Mediterranean countries. From a simulation exercise, we conclude that membership of the EC could lead to an expansion of Hungarian exports to the Communities of some 48 percent, with meats, iron and steel, fruit and vegetables, textiles, clothing being the main sectors to gain, in declining order. This results from setting tariffs to zero and eliminating non-tariff barriers. The largest projected export expansion under other forms of relationship with the EC would be more than one third less. This would occur under EFTA membership which would mainly benefit manufactured exports. If EC or EFTA membership is ruled out, for whatever reason, Hungary must seek some closer relationship with the EC, encompassing agriculture as well as manufactures, and covering tariffs and non-tariff barriers.

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ANNEX I

Annex Table A1: Composition of EC Exports to Hungary

	1983	1984	1985	1986	1987	1988
TOTAL TRADE ($million)	1,759	1,730	1,890	2,399	2,734	1,819
0 FOOD AND LIVE ANIMALS	4.9	4.3	3.1	3.3	3.0	3.2
1 BEVERAGES AND TOBACCO	0.8	0.6	0.6	0.7	0.4	0.3
2 CRUDE MATLS EXCL FUELS	5.0	5.1	4.4	4.7	4.2	3.5
3 MINERAL FUELS ETC	0.6	1.1	2.5	1.1	0.4	0.3
4 ANIMAL,VEGETABLE OIL,FAT	0.2	0.2	0.2	0.1	0.1	0.2
5 CHEMICALS	25.0	25.2	22.4	22.7	22.1	19.6
6 BASIC MANUFACTURES	26.8	25.7	26.1	25.3	25.4	25.2
7 MACHINES,TRANSPORT EQUIP	27.9	28.1	30.9	31.9	34.1	36.7
8 MISC MANUFACTURED GOODS	7.3	7.8	8.0	8.3	8.4	10.4
9 GOODS NOT CLASSD BY KIND	1.5	1.8	1.8	1.8	1.8	0.6

Source: COMTRADE

Annex Table A2: Composition of Hungary's Imports from the USSR, 1983-1987

	1983	1984	1985	1986	1987
Total trade ($million)	2,423	2,354	2,449	2,960	2,805
of which (percent)					
Agricultural pr.	15.0	14.7	13.0	14.8	14.6
Mineral fuels	47.0	51.4	53.6	53.9	50.7
Chemicals	6.3	6.9	8.1	7.1	7.3
Machines,trans.equip	22.6	18.7	17.3	16.3	18.8
Other manuf.products	8.9	8.2	7.9	7.9	8.4

Source: COMTRADE

Annex Table A.3: Balassa RCA Indices, 1986-87 in EC-10 Market Overlapping Comparative Advantage with GDR, Spain or Portugal

SITC	Description	EC-10 87 Imports Hungary	RCA Indices for : Hungary	GDR	Spain	Portugal
0012	SHEEP, LAMBS, GOATS	52435	92.98	1.12	1.08	0.02
0015	HORSES, ASSES, MULES	8246	4.89	2.02	0.12	0.05
0019	LIVE ANIMALS FR FOOD NES	1215	14.92	61.48	0.54	0.66
0112	MUTTON ETC FRSH,CHLD,FRN	4779	2.25	0.00	1.16	0.00
0118	MEAT NES FRESH,CHLD,FRZN	90674	99.03	2.85	1.09	0.01
0313	SHELL FISH FRESH,FROZEN	7303	1.26	0.82	1.24	0.21
0440	MAIZE UNMILLED	22073	4.61	0.00	1.13	0.00
0451	RYE UNMILLED	206	1.58	0.07	4.23	0.02
0519	FRESH FRUIT NES	8227	1.35	0.00	9.21	0.14
0536	FRUIT TEMPORARILY PRESVD	12328	13.44	0.02	3.37	0.36
0539	FRUIT NUTS NES PRESERVED	6274	2.23	0.02	4.24	0.02
0545	OTHER FRESH VEGETABLES	18056	2.38	0.00	9.92	0.24
0546	VEGETABLES SIMPLY PRESVD	9451	4.20	0.02	1.84	0.76
0551	VEG DRIED EXCL LEGUMES	10838	20.29	0.00	1.64	1.11
0555	VEGTBLES PRSVD,PREPD NES	10371	1.93	0.01	3.05	1.49
0751	PEPPER AND PIMIENTO	5647	9.11	0.00	2.49	0.07
0752	SPICES,EXCL PEPPER,ETC	1038	1.89	1.14	2.63	0.02
0913	PIG,POULTRY FAT RENDERED	10387	33.91	13.70	0.00	0.00
1121	WINE OF FRESH GRAPES ETC	13536	1.50	0.00	3.92	10.63
2118	WASTE AND USED LEATHER	15	3.93	0.44	1.42	1.74
2218	OIL SEEDS,NUTS,ETC NES	26828	5.74	2.22	0.27	0.00
2314	SCRAP UNHARDENED RUBBER	875	12.32	21.65	1.23	0.05
2412	WOOD CHARCOAL	316	3.93	1.06	14.19	15.52
2421	PULPWOOD	3958	6.10	1.20	0.27	5.21
2626	WOOL SHODDY	512	32.09	0.00	1.06	0.00
2633	COTTON WASTE UNCOMBED	1094	4.77	0.78	0.05	2.53
2663	REGENERATD FIBRE TO SPIN	2335	2.08	11.29	0.68	0.06
2664	WASTE OF SYN,RGNRTD FBRE	3660	12.30	9.03	0.13	0.03
2670	WASTE OF TEXTILE FABRICS	1041	2.02	3.55	0.16	0.45
2751	INDUSTRIAL DIAMONDS	513	1.36	1.88	0.01	0.00
2911	BONES,IVORY,HORNS,ETC	1659	7.12	6.47	0.67	0.22
2919	ANIMAL MATERIALS NES	61830	22.78	0.55	0.82	1.51
2923	VEG PLAITING MATERIALS	3105	26.50	0.13	1.56	0.28
2924	VEG USED IN PHARMACY ETC	4673	9.36	0.77	0.47	0.16
2925	SEEDS,ETC FOR PLANTING	8270	5.88	5.65	0.22	0.06
2929	OTH CRUDE VEG MATERIALS	767	1.00	0.00	2.75	3.14
3321	MOTOR SPIRIT,GASOLINE	11779	1.01	0.08	1.32	0.62
3322	WHITE SPIRIT,KEROSENE	3852	2.06	0.00	0.92	1.07
3323	DISTILLATE FUELS	37835	1.62	2.74	0.15	0.08
3326	MINERAL JELLY,WAX	12351	25.04	4.28	0.68	0.00
3329	NONCHEM COAL,PETR WASTES	6216	3.12	0.00	1.10	0.00
4217	RAPE,COLZA,MUSTARD OILS	147	1.02	3.96	0.01	0.00
5121	HYDROCARBONS ETC	59087	4.24	3.20	1.07	1.66
5127	NITROGEN-FNCTN COMPOUNDS	11689	1.16	3.05	0.42	0.16
5141	METAL CMPD OF INORG ACID	1154	1.18	4.84	0.99	0.07
5142	CONTINUATION OF 514.1	3289	1.51	5.08	0.91	0.02
5214	COAL,PETR DISTILATES NES	3919	3.89	1.22	3.71	4.43
5413	ANTIBIOTICS	4680	1.87	0.07	0.70	2.27
5414	VEG ALKALOIDS AND DERIVS	2126	2.09	0.49	1.11	0.07
5415	HORMONES	1228	1.30	1.29	0.11	0.15
5511	ESSENTIAL OILS,RESINOIDS	855	1.02	0.51	1.32	0.45
5611	CHEM NITROGENOUS FERTLZR	19208	6.38	5.87	0.98	1.75
5711	PREPARED EXPLOSIVES	561	1.63	1.31	0.47	0.36
5714	HUNTIN,SPORTIN AMMUNITN	1648	10.20	1.79	0.78	0.06
6119	LEATHER NES	3638	1.58	2.93	3.63	0.19
6123	PREPD PARTS OF FOOTWEAR	23618	12.76	0.05	3.00	13.12
6130	FUR SKINS TANNED,DRESSED	5026	1.59	0.82	12.19	0.55
6291	RUBBER TYRES,TUBES	15891	1.37	2.95	2.23	0.48
6294	RUBBER BELTING	1589	2.40	1.11	0.86	0.27
6321	BOXES,CASES,CRATES	332	1.07	0.00	3.96	8.09
6324	BUILDERS WOODWRK,PREFABS	5892	2.56	0.36	0.83	4.89
6327	WOOD MFRS,DOMESTIC ETC	2544	3.29	2.67	2.65	2.97
6328	OTHER WOOD MANUFACTURES	13283	11.08	1.94	1.22	1.71
6416	FIBREBOARD OF WOOD ETC	3561	3.35	0.01	1.63	2.37
6513	GREY COTTON YARN IN BULK	8256	1.31	0.08	1.33	2.01
6514	COTTON YARN,BLCHD,DYED	319	1.30	0.14	1.03	1.44
6515	FLAX,RAMIE,TRU HEMP YARN	1044	3.93	0.00	2.04	0.32
6522	WOVEN COTTON BLCHD,ETC	8749	1.25	0.36	0.47	2.70
6533	LINEN,RAMIE,TR HEMP FABS	2212	6.03	0.09	1.76	0.14

Cont.

Cont.

SITC	Description	EC-10 87 Imports Hungary	RCA Indices for : Hungary	GDR	Spain	Portugal
6556	CORDAGE AND MANUFACTURES	3131	3.92	1.79	0.70	18.46
6561	BAGS,SACKS OF TEXTILES	1182	2.57	2.33	0.86	6.27
6562	MADE-UP CANVAS GOODS	5013	10.58	21.48	0.28	0.15
6569	OTHER TEXTILE PRODUCTS	10157	2.22	0.78	0.73	26.18
6576	CARPETS ETC UNKNOTTED	7387	1.40	0.50	0.31	1.34
6577	TAPESTRIES	99	4.70	0.16	0.43	4.78
6578	MATS,SCREENS,ETC PLAITED	1571	16.42	0.31	4.43	0.02
6612	CEMENT	1945	1.16	10.00	0.70	0.01
6643	DRAWN,BLOWN GLASS UNWRKD	5006	21.12	17.91	1.09	0.62
6645	CAST,ROLLED GLASS UNWRKD	2177	11.97	5.95	.84	1.23
6648	SHEET GLASS METAL-COATED	1166	1.81	2.33	1.08	0.17
6651	BOTTLES ETC OF GLASS	6062	2.93	0.88	1.17	2.03
6652	HOUSEHLD,HOTEL ETC GLASS	8711	3.78	4.51	0.72	1.43
6664	PORCELN,CHINA HOUSE WARE	3157	3.02	15.39	0.54	2.44
6665	COARSE CERAMIC HOUSEWARE	1121	1.40	3.96	0.77	15.21
6666	CERAMIC ORNAMENTS ETC	1521	1.56	5.76	1.85	15.24
6727	IRN,STL COIL FR REROLLNG	18636	2.45	1.14	0.03	0.08
6731	IRON,STEEL WIRE ROD	4851	1.90	1.31	1.09	1.48
6734	IRN,STL BIG SECTIONS ETC	15159	4.28	8.59	3.07	0.58
6735	IRN,STL SMALL SECTNS ETC	1059	12.81	7.16	1.05	0.32
6741	IRN,STL HEAVY PLATE ETC	16812	4.29	9.59	1.26	0.03
6742	IRN,STL MEDIUM PLATE ETC	7673	6.12	2.54	1.18	0.01
6743	IRN,STL THIN UNCOATED	11840	1.16	1.93	1.86	0.03
6782	IRN,STL TUBE SEAMLES NES	7448	2.28	4.32	1.26	0.02
6783	IRON,STL TUBE,PIPE NES	8212	1.69	0.30	1.09	0.01
6791	IRON CASTINGS ROUGH	1305	3.48	4.94	1.89	3.21
6841	ALUMINUM,ALLOYS, UNWRGHT	11546	1.29	0.09	1.54	0.12
6842	ALUMINUM,ALLOYS WORKED	24546	2.04	0.62	0.38	0.08
6921	MTL STORAGE,MF TANKS,ETC	528	1.12	1.61	0.42	0.58
6923	COMPRESSED GAS CYLINDERS	871	2.44	1.34	0.41	10.09
6941	STL,COPPER NAILS ETC	1881	3.56	1.85	2.53	0.10
6971	DOMESTC STOVES,OVENS,ETC	1973	1.71	3.85	3.43	0.22
6972	BASE MTL DOMESTC UTENSLS	5831	2.61	4.28	1.25	2.31
7122	HARVESTING ETC MACHINES	19890	5.19	2.22	0.14	0.02
7172	SKIN,LEATHER WORKNG MACH	2422	7.59	0.02	1.24	0.46
7197	BALL,ROLLER,ETC BEARINGS	8133	1.55	0.96	0.91	1.11
7221	ELECTRIC POWER MACHINERY	17047	1.32	4.23	0.88	0.98
7250	DOMESTIC ELECTRIC EQUIP	35782	2.21	5.21	1.54	0.20
7292	ELECTRIC LAMPS,BULBS	30788	9.48	3.84	0.50	0.27
7316	FREIGHT CARS NOT POWERED	574	1.92	4.57	0.23	0.04
8122	CERAMIC PLUMBNG FIXTURES	2508	4.45	0.56	2.87	2.65
8124	LIGHTING EQUIPMENT	3091	1.00	4.42	1.76	0.62
8210	FURNITURE	50616	2.15	7.72	1.10	0.59
8310	TRAVEL GOODS,HANDBAGS	7362	1.81	7.62	0.68	0.15
8411	TEXTILE CLOTHES NOT KNIT	199426	4.80	0.26	0.30	5.41
8412	TXTL CLTHG ACSRY NONKNIT	22726	9.26	2.54	0.34	1.78
8413	LEATHER CLOTHES,ACCESRYS	14679	3.16	0.13	0.49	1.06
8414	CLOTHING,ACCESSORYS KNIT	67364	2.09	0.48	0.50	8.56
8420	FUR ETC CLOTHES,PROD	12460	7.44	1.49	1.65	0.28
8510	FOOTWEAR	47792	2.47	0.13	3.16	9.99
8921	PRINTED BOOKS,GLOBES,ETC	8738	1.82	1.78	2.23	0.70
8923	PRINTED,MANUSCRIPT MUSIC	425	14.88	3.36	0.05	0.00
8943	NON-MILITARY ARMS	433	1.35	13.63	3.73	2.54
8944	OUTDOOR SPORT GOODS NES	3464	1.31	2.80	0.73	0.73
8945	AMUSEMENTS ETC FOR FAIRS	1161	4.95	0.74	1.30	0.03
8992	BROOMS,PLAITED PROD,ETC	3120	2.79	3.30	1.08	1.20
8993	CANDLES,MATCHES,ETC	1336	1.33	2.18	1.13	3.22

Source: COMTRADE and calculations by the authors.
Note: See Footnote 22 in main text for interpretation of the RCA index. The item includes in this table are those for which Hungary has comparative advantage (on RCA>1) and for which either the GDR, Spain or Portugal has comparative advantage (i.e. one of these three has an RCA>1).

Annex Table A4: EC IMPORTS FROM HUNGARY AFFECTED BY BROAD CATEGORIES OF NTBS APPLIED IN 1988

SITC	DESCRIPTION	IMPORTS '84 $ '000	NTB TYPES PRICE	THREATS	QRS	ALL
ALL	TOTAL TRADE	3861468	27.7	7.0	26.3	35.2
00	LIVE ANIMALS	364167	87.3	0.9	84.9	88.3
01	MEAT & PREPARATIONS	320130	40.3	1.9	11.5	39.7
02	DAIRY PRODUCTS & EGGS	5661	99.5	0.0	26.2	89.8
03	FISH & PREPARATIONS	12303	7.9	0.0	0.0	7.9
04	CEREALS AND PREPARATIONS	42912	100.0	4.2	98.8	100.0
05	FRUIT & VEGETABLES	122643	44.0	8.1	21.1	61.5
06	SUGAR, PREPARATIONS & HONEY	4563	46.2	0.0	20.9	58.1
07	COFFEE, TEA, COCOA, SPICES	9621	65.5	0.0	12.7	65.5
08	ANIMAL FEEDING STUFF	63378	19.7	0.0	39.8	39.8
09	MISC FOOD PREPARATIONS	87246	98.3	0.1	0.0	85.4
11	BEVERAGES	65259	98.5	0.0	98.8	0.3
12	TOBACCO & MANUFACTURES THEREOF	3618	0.0	0.0	0.0	0.0
21	HIDES,SKINS, INC. FUR, UNDRESSED	8361	0.0	0.0	0.0	0.0
22	OIL SEEDS,NUTS,KERNELS	6660	0.0	1.1	9.6	9.6
23	RUBBER CRUDE,SYNTHETIC	2763	0.0	0.0	6.8	6.8
24	WOOD, LUMBER & CORK	137358	0.0	0.0	0.1	0.1
25	PULP AND WASTE PAPER	306	0.0	0.0	0.0	0.0
26	TEXTILE FIBERS (NOT YARN, THREAD)	51669	0.4	8.8	10.2	18.9
27	CRUDE FERTILIZERS & MINERALS	92610	3.7	19.9	37.3	40.0
28	METALLIFEROUS ORES, METAL SCRAP	135675	0.0	4.5	0.6	5.2
29	CRUDE ANIMAL VEG MATERIALS NES	37332	0.2	2.5	21.6	21.9
32	COAL,COKE,BRIQUETTES	423	0.0	0.0	0.0	0.0
33	PETROLEUM & PETROLEUM PRODUCTS	321309	0.0	21.6	11.1	32.6
34	GAS NATURAL AND MANUFACTURED	75366	0.0	0.0	0.5	0.5
41	ANIMAL OILS & FATS	11691	34.4	0.0	3.2	34.4
42	FIXED VEGETABLE OILS & FATS	2637	0.0	0.0	0.0	0.0
43	PROCESD ANIMAL, VEG OIL & FATS	621	0.0	0.0	4.2	4.2
51	CHEMICAL ELEMENTS & COMPOUNDS	387792	0.1	0.0	1.1	1.2
52	MINERAL TAR & CRUDE CHEMICALS	99108	0.0	0.0	2.9	2.9
53	DYEING, TANNING & COLORING MATRLS	2160	0.0	0.0	7.3	7.3
54	MEDICINAL & PHARM PRODUCTS	19323	0.0	0.5	6.6	7.1
55	ESSENTIAL OILS & PERFUME MATRLS	2286	0.0	0.0	0.0	0.0
56	FERTILIZERS MANUFACTURED	30384	0.0	0.0	11.5	11.5
57	EXPLOSIVES, PYROTECH PRODUCTS	2331	0.0	0.0	24.8	24.8
58	PLASTIC MATERIALS ETC	20799	0.0	0.0	9.1	9.1
59	CHEMICALS NES	19080	3.3	0.0	5.3	5.5
61	LEATHER/FURS INC MANUFS	20574	0.0	37.3	5.8	43.1
62	RUBBER MANUFACTURES	22887	0.0	0.0	16.6	16.6
63	WOOD & CORK MANUFACTURES	26847	10.5	0.0	7.4	16.7
64	PAPER/BOARD & MANUFACTURES	10386	76.9	0.0	10.1	78.6
65	TEXTILE YARN, FABRICS & ARTICLES	97056	85.2	2.0	81.0	96.9
66	NON-METALLIC MINERAL MANUFACTURES	58986	10.8	1.2	24.2	32.7
67	IRON & STEEL	161280	37.3	54.3	60.7	61.4
68	NON-FERROUS METALS	61407	0.0	0.1	5.7	5.8
69	METAL MANUFACTURES NES	44838	0.0	0.7	3.6	4.3
71	MACHINES NON-ELECTRIC	204147	7.7	2.5	2.2	11.2
72	MACHINERY ELECTRIC	167283	0.5	3.2	3.8	7.0
73	TRANSPORT EQUIPMENT	52497	0.0	3.4	4.0	7.4
81	SANITARY,PLUMBG,HEATNG,LGHTNG EQ.	11961	62.4	7.0	7.0	62.5
82	FURNITURE	39870	0.0	10.1	9.5	19.6
83	TRAVEL GOODS, HANDBAGS	3042	0.0	0.0	4.2	4.2
84	CLOTHING	181944	85.9	0.5	90.0	90.2
85	FOOTWEAR	36810	0.0	88.9	51.2	66.7
86	PROF. SCIENTIFIC ETC INSTRUMENTS	29835	0.0	1.6	2.3	3.9
89	MISC MANUFACTURES NES	59157	0.0	0.9	2.3	3.2

Source: See Annex III.

ANNEX II - THE SIMULATION MODEL & DATA SOURCES

Reduced form of the model

It is quite standard to express the trade creation effect for trade partner (or exporter) i, TCi (or dMi/Mi), as a function of original imports Mi, the elasticity of import demand (Em), the export supply elasticity (Ex) and the change in rate of protection, t, for exporter i thus:

$$TCi = Mi*Em*d(t)/(1+t)(1-Em/Ex)$$

The term d(t) is the difference between the rate affecting exporter i after applying the trade policy change in each simulation scenario.

Trade diversion (TDi). At the tariff line level a product coming from one exporter is considered to be an imperfect substitute for the "same" product coming from other exporters - the Armington (1969) assumption. The elasticity of substitution (Es) is the percentage change in the relative import share of a particular supplier associated with a one percent change in the relative price of the products offered by that supplier and the rest of the world. This elasticity is used to compute the trade diversion effect, i.e. the extent to which trade is substituted between a particular exporter and all other suppliers as a consequence of shifts in relative prices associated with differential movements in tariff rates.

The trade diversion between exporters is therefore computed by assuming that relative market shares will be changed in proportion to the relative price changes following the trade policy change in the importing country.

The price change (dP/P) for an imported good entering the importing country is the combined effect of the tariff change and the price effect associated with increasing exports where there is limited export supply capacity. This can be derived from the definition of Ex:

$$Ex=(dX/X)/(dP/P)$$

Moreover, the equivalence between imports (M) from i and exports (X) by i implies that dX/X is equal to dM/M - the expression for trade creation. With some substitution and re-arrangement of terms the price effect is given as:

$$dP/P = dt/(1+t)*(1+(Em/(Ex-Em)))$$

This can be calculated for each foreign supplier (exporter). The relative price change (RPC) facing any single exporter is his own price change relative to the price change for all other exporter of the same products (computed as an import weighted average).

(It may be noted that if exporters of the same product have different export supply elasticities, there will be price effects which will vary from exporter to exporter, thus causing trade diversion effects. However, the lack of data on different exports supply elasticities precluded this option).

The change in relative market share of any individual exporter for an item is proportionate to the relative price change times the elasticity of substitution. Thus, the new market relative share (NMS) of any individual exporter,i, can be computed as the market share prior to the trade policy change times 1 plus the relative prince change times the elasticity of substitution:

$$NMS=(Mi/(\Sigma Mi-Mi))*(1+(RPC*Es))$$

where (ΣMi-Mi) is the total of imports coming from other exporters.

The new market share can then be applied to the import data to compute the trade diversion effect.

Data

(i) Tariffs

The basic tariff information is drawn from the GATT Trade and Tariff Study for 1983. (This data base is not publicly available). This study contains extensive information on trade and tariff rates. Information on tariffs include both most favored nation (MFN) and preferential rates relevant for the exporter, particularly GSP. All rates are expressed in ad valorem terms. In the GATT Study "ad valorem" equivalents have been estimated for all specific and combined rates.

The main rates are as follows:

(a) MFN rate. Most-favored nation rate. This rate is normally applied to all trading partners unless preferential tariff treatment is granted. As all countries have now fully implemented their tariff cuts, the Tariff Study shows the MFN rate in force for the year of the study as well as that introduced following the implementation of the Tokyo Round concessions. This latter is the rate being negotiated in the Uruguay Round.

The actual MFN rate being applied to GATT contracting can be lower than the bound post-Tokyo Round rate as a consequence of further tariff cuts implemented on a unilateral basis (e.g., by developing countries under World Bank lending programs).

(b) GSP rate. The rate normally applicable to countries eligible for preferential treatment under the Generalized System of Preferences. There may be limits on GSP treatment, with a higher rate (normally the MFN rate) being applied to an exporter, even if the country in question is a GSP beneficiary country.

(c) Other preferential rates. Complicated rate structures exist as a consequence of various preferential arrangements other than those under GSP, e.g. under the EC/EFTA protocol or EC special preferences for Mediterranean countries or African, Caribbean and Pacific Countries under the Lomé Convention.

(d) Actual rate. The rate applicable to the exporter taking into account of variations in the applied MFN rate and in preferential treatment.

Several factors should be considered with regard to the tariff information.

First, as mentioned before, all tariffs which are not originally expressed in ad valorem terms have been converted into ad valorem equivalents. The normal procedure adopted to compute these equivalents is based on tariff revenues and import values. However, both tariff revenues and import values can vary considerably over time. Tariffs vary because of the existence of variable levies and other elements which adjust tariffs, while import values vary essentially as a consequence of price fluctuations. Therefore, the ad valorem equivalents of specific and combined tariffs may vary from year to year even though there are no changes in the scheduled rates.

Second, GSP preferential treatment is not always fully granted due to partial tariff line coverage or to other limitations and exclusions. Imports above ceilings are dutiable at the MFN rate, In the present study we have used general utilization factors from UNCTAD to apportion the share of GSP eligible imports

receiving GSP and MFN treatment. However, this could lead to errors in computing the average GSP rate for some sectors.

Third, the trade-weighted world rate may be underestimated as no account is taken of general rates (which are normally higher than MFN rates), which are applied in some markets to selected non-GATT contracting parties. In addition, it must be noted that developing countries' and world rates are trade-weighted average rates and are computed using 1986 trade flows. These weights may have changed considerably over time in the last years.

(ii) Non-tariff barriers

Information on the ad valorem equivalent of non-tariff barriers was taken from information compiled by Laird and Yeats (1990a) who compiled estimates from micro-economic studies see the main text for a discussion. Laird and Yeats (1990b) point out that the failure of early studies to include non-tariff barriers in the base level of protection when estimating the trade effects of tariff changes may lead to substantial overestimation of these effects.

(iii) Imports

Trade figures are drawn from the information available in the trade tapes produced by the GATT Trade and Tariff Study. They are not directly comparable with data in the SITC classifications of the United Nations COMTRADE data base, nor with various national accounting or balance of payments estimates. In the GATT series trade flows are recorded at the point of clearing customs, even though they may have been imported considerably earlier and held in bond. In the case of the United States, Canada, Australia and New Zealand, imports are valued on a free-on-board (f.o.b) basis, while for all other developed countries a cost-insurance-freight (c.i.f.) valuation is used.

Elasticities

The import demand elasticity values are based on the work of:

> Robert Stern, et. al., Price elasticities in International Trade, London, Macmillan, 1975.
>
> William Cline et al., Trade Negotiations in the Tokyo Round: A Quantitative Assessment, Washington, D.C., the Brookings Institution, 1978.
>
> Rolf Langhammer, "Problems and Effects of a Developing Country's Tariff Concession Round on South-South Trade", Kiel Working Paper, No. 167, Institute for world Economics, Kiel, February 1983.

These elasticities of import demand should be taken as merely indicative. First, these values were estimated some years ago. The relationship between import demand and domestic price for particular product groups may have changed over the years. Second, the literature used as a source for elasticities normally refers to products defined at a much higher level of aggregation than the tariff line. For the simulation exercise, these values of elasticities have been assigned to all products belonging to product groups found in the literature. Of course, group elasticities may not be valid for specific products falling in certain groups.

There is no comprehensive literature on supply elasticities, country by country for all products. Accordingly, we have assigned the following values for the purpose of the simulations.

SITC	Ex	Es
0	1.0	-5.0
1	1.0	-5.0
2	1.0	-5.0
3	3.0	-5.0
4	1.0	-5.0
5	3.0	-5.0
6	5.0	-3.0
7	5.0	-1.5
8	5.0	-1.5
9	5.0	-1.5

ANNEX III - NTB DATA

The data used to compile information on NTBs Section III(b) come from several sources.

The NTB information used in the main statistical analysis covers only industrialized countries and is compiled from official sources, including national sources as well as the documents of international organizations such as GATT. The information on NTBs has been systematically encoded in computer files at the tariff-line level by UNCTAD and access to the resulting data files has been made available to the World Bank.

The trade data used in the analysis are recorded at the most detailed tariff-line level, again on the basis of national tariff classifications. The data for this study were collected by the World Bank directly from national statistical offices.

The main measure of the extent of use of NTBs employed in this paper is the trade coverage ratio (TCR), or percentage of trade with a particular trading partner or group of trading partners in given sector affected by NTBs. Like the trade-weighting of tariffs, it has the advantage that it gives greater weight to products and trade partners with higher trade volumes. However, it has the disadvantage that these same trade figures may be depressed because of the presence of NTBs or tariffs, i.e. it has an inherent downward bias. (In the extreme case, a prohibition would produce a zero trade weight).

The trade coverage ratios are computed using fixed 1984 trade weights. This is equivalent to using a fixed "basket of groceries" for the computation of price movements. The implication is that changes in the indices can only occur (i) when a new NTB is imposed or an existing NTB is eliminated, (ii) when a tariff line is affected through the extension of, or exemption from, the coverage of an existing NTB, or (iii) when an individual country is affected through the extension of, or exemption from, the scope of an existing NTB. The trade coverage ratio does not reflect the intensity of application of an existing NTB to an individual country or group of countries on a particular tariff line or set of tariff lines. Thus, a reduction or expansion in the size of a quota is not captured by these measures.

It is important to note that for the calculation of the trade coverage ratios intra-EC trade was excluded from the analysis. The inclusion of intra-EC trade would yield much lower ratios than those shown in the tables.

The following is a brief glossary of the different types of NTBs to which reference is made in the paper.

Price NTBs

A number of the measures included are strictly speaking tariffs, e.g. seasonal tariffs, but they depart significantly from standard ad valorem tariffs in their use and intentions. It is this non-"pure" tariff facet that has led to their inclusion. The measures include:

(i) Tariff quotas. The application of two tariff rates, the higher rate coming into effect when the quantity or value of imported goods exceeds a predetermined level. These may be ad valorem, specific or mixed;

(ii) Seasonal tariffs. The application of higher tariff rates at times when domestic production is taking place;

(iii) Variable levies. Import charges based on the di ference between a value established or decreed by the authorities in the importing country and the value declared by the importer or exporter).

(iv) Non ad valorem tariffs. These include ad valorem tariffs with specific minimum rates e.g. based in part on some physical unit such as weight or quantity. They are also to ensure that imports do not drop below certain unit values.

(v) Anti-dumping/countervailing investigations.

(vi) Voluntary export price restraints. These are normally price undertakings to avoid the imposition of anti-dumping or countervailing duties.

(vii) Product specific taxes. Discriminatory taxes applied at the frontier, i.e. which are not applied to domestic products.

(viii) Minimum prices/reference prices. Imports below certain prices may trigger the imposition of addition duties.

Threats

These measures include:

(i) Non-automatic authorizations. These include a variety of licensing procedures and discretionary authorizations. When licenses are used to administer QRs, they are included only as QRs.

(ii) Price surveillance. The monitoring of import prices, including of those products subject to price undertakings.

(iii) Anti-dumping/countervailing investigations.

QRs

Various types have been mentioned in the paper. They include

(i) the main body of quotas, whether, global, country specific, or seasonal;

(ii) bilateral agreements on textiles and clothing within the framework of the MFA, as well as textile quotas (including some other restraints) are those not applied under the MFA, e.g. against the socialist countries of Eastern Europe; and

(iii) voluntary export restraints and orderly marketing arrangements. In principle prohibitions are covered.

All

The heading "All" encompasses all types of NTBs covered by the data base. In fact, for the this is merely a regrouping of other measures already mentioned, viz. price NTBs, threats and QRs. The reason for this is that - unlike the case of other countries covered by the data base - no information is included on health and safety regulations (including all types of technical standards and packing regulations) for the EC countries.

The above list of measures gives an indication of what has been referred to on the paper. It may also help to indicate what has not been covered. No information has been included on measures to promote domestic production or

exports, i.e. subsidies of all kinds are not covered. However, many products whose production receives support by domestic price support schemes also need complimentary import restraining measures which are covered by the analysis.

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